

2020 Pennsylvania Traffic Data



**Bureau of Planning and Research
Transportation Planning Division**



In cooperation with:
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Federal Highway Administration
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On The Cover:
Intersection of I-70 and I-79 in Washington County.

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Introduction

The “Pennsylvania Traffic Data Book” documents procedures for developing accurate estimates of highway traffic volumes based on sample traffic counts.

Traffic information is critical in transportation decision-making related to highway funding, traffic engineering, highway design, air quality analysis, planning and programming, as well as winter services, highway maintenance and construction.

The “Pennsylvania Traffic Data Book” provides current traffic expansion factors through the use of tables, charts, and graphs. Expansion factors allow the traffic professional to use a sample traffic count and develop reliable and comparable Annual Average Daily Traffic (AADT) estimates. All tables & charts in the “Pennsylvania Traffic Data Book” are derived from the data of permanent sites. Of the 143 sites in Pennsylvania, 122 were used to calculate the factors.

Some of the permanent sites are excluded on a year to year basis. If it is determined a permanent site has less than 50% of the current year’s data, it is not used for the factors. Reasons for a permanent site having less than 50% of the current year’s data would be construction projects or equipment malfunction.

Please keep in mind that the 2020 data was impacted by the COVID-19 pandemic when using the data within the Pennsylvania Traffic Data Book. Values shown for Tables 355, 365, and Monthly Variation are from 2019 due to underrepresented 2020 traffic data values caused by the COVID-19 pandemic.

How to Use this Booklet

This booklet provides current traffic expansion factors through the use of tables, charts, and graphs. All of the tables, charts, and graphs are listed in the Table of Contents. Refer to the description provided with each table, chart, and graph to ensure that the data presented is what you need.

Acronyms are used quite often throughout this publication. A complete list of acronyms and their meanings are located in the back of the booklet. In addition, an index was created for this booklet to help you find a particular topic quickly.

We would appreciate any comments or suggestions you can provide on information presented in this booklet. Questions or comments relating to data presented in this publication can be directed to:

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The 2020 Traffic Data Book and County Traffic Volume Maps are available free on our website! Traffic Volume Maps can also be purchased through our Maps and Publications Sales Store on the website.

www.penndot.gov

Select: Projects & Programs

Select: Planning

Select: Maps for the County Traffic Volume Maps or select Traffic Information for the Traffic Data Book or select Maps followed by Sales Store List to purchase a map

New Developments

New Permanent Continuous Automatic Vehicle Classification (CAVC) Site Installations

Nine new CAVC sites were installed in the 2020 calendar year. All nine sites were installed to collect classification data in all lanes of travel. A list of the sites are below, showing their location and when the site began collecting data.

- CAVC 6 – SR 879 in Lawrence Township, Clearfield County, began in October.
- CAVC 7 – SR 29 in Eaton Township, Wyoming County, began in January the following year.
- CAVC 9 – SR 563 in West Rockhill Township, Bucks County, began in October.
- CAVC 10 – SR 10 in Lower Oxford Township, Chester County, began in October.
- CAVC 11 – SR 948 in Fox Township, Elk County, began in October.
- CAVC 822 – SR 283 in Lower Swatara Township, Dauphin County, began in October.
- CAVC 848 – SR 15 in Straban Township, Adams County, began in May.
- CAVC 855 – SR 3011 in Penn Township, Huntingdon County, began in May.
- CAVC 856 – SR 1026 in White Township, Cambria County, began in May.

Six sites were reinstalled and upgraded from an automatic traffic recorder (ATR) to a CAVC in the 2020 calendar year. All six sites now collect classification data. A list of the sites are below, showing their location and when the site began collecting data.

- CAVC 15 – SR 522 in Todd Township, Fulton County, began in May.
- CAVC 360 – SR 219 in Bloom Township, Clearfield County, began in May.
- CAVC 363 – SR 219 in Lafayette Township, McKean County, began in June.
- CAVC 377 – I-295 in Middletown Township, Bucks County, began in October.
- CAVC 382 – SR 3005 in Lower Yoder Township, Cambria County, began in May.
- CAVC 395 – SR 21 in German Township, Fayette County, began in December



Installation of CAVC 15 in Fulton County

Traffic Data Collection

Traffic data is collected on 40,000 miles of PennDOT owned roads and 3,700 miles of local federal aid roads in Pennsylvania. Approximately 10,000 raw traffic counts are collected per year by:

- 3 Bureau of Planning and Research (BPR) Field Staff
- PennDOT Engineering District 10-0
- 8 Metropolitan Planning Organizations (MPOs)
- Contractors

Volume: The majority of the counts taken as part of our statewide count program record volume of traffic on a roadway. Volume is usually expressed as Annual Average Daily Traffic (AADT), which represents traffic volume over an average 24-hour period.

Classification: One method of data collection used for our count program is vehicle classification. Vehicles are classified into 13 classes ranging from cars to trucks in accordance with the Federal Highway Administration vehicle classification scheme.

Weight: Truck weight data is collected from WIM stations.

Speed: Speed data is collected from permanent traffic recorders.



Short-Term classification count installed.

Traffic Data Collection Sources

Automatic Traffic Recorders (ATRs)

12 ATRs strategically located throughout the state count volume and speed data on a continuous basis 365 days per year. A map showing the locations of ATRs throughout the state is provided on page 13.

Short-Term In-Pavement Sites (STIP)

Approximately 13 inductive loop sites, referred to as STIP sites are installed throughout the state of Pennsylvania. Volume data is collected from these permanent sites for a 24-hour period.

Continuous Automatic Vehicle Classifier (CAVC)

111 CAVC sites collect continuous vehicle classification data. A map showing CAVC locations are provided on page 13.

Weigh-In-Motion (WIM)

20 WIM stations provide continuous truck weight and vehicle classification data. 13 of the 20 sites are VWIM. WIM stations are shown on the map on page 14.

Pneumatic Tubes

The majority of the counts are collected using pneumatic tubes. Axle counts are collected using a traffic counting device in association with a single pneumatic tube stretched across the roadway. An axle correction factor is applied to adjust vehicle axle base data for the incidence of vehicles with more than two axles.

Two tubes are used to count and classify vehicles by type based on axle configuration.

Manual Counts

Manual counts are taken on sections of roadways that are not accessible to automated data collection equipment or have safety limitations. Observers classify vehicles by type based on axle configuration.

Toll Receipts

The Delaware River Joint Toll Bridge Commission and the Delaware River Port Authority document traffic between Pennsylvania and New Jersey.

The Pennsylvania Turnpike Commission toll receipt surveys provide data on the Commonwealth's toll roads.

Permanent Traffic Recorders

Pennsylvania maintains permanent traffic recorders at 143 strategically selected locations throughout the state. These permanent sites collect traffic volume data on a continuous basis throughout the year. This data is used to develop daily and seasonal factors, as well as to identify changes in traffic patterns. Based on a research study performed by Pennsylvania State University and West Virginia University, it was determined that PennDOT locations in the traffic pattern groups were acceptable according to the FHWA Traffic Monitoring Guide.



CAVC 9 in Bucks County

The permanent sites use magnetic loops embedded in the pavement for vehicle detection. Additionally, CAVC sites utilize piezo sensors to classify and WIM sites utilize Lines™ quartz sensors to weigh. The data is stored on-site in traffic counters, prior to being automatically polled every night through the use of modems located at each permanent site.

Traffic Pattern Group (TPG)

Highway traffic characteristics can vary by geographical area, roadway type, and population density. Therefore, individual traffic volume counts are categorized into one of ten Traffic Pattern Groups (TPGs). The TPGs are based on highway functional classification, geographic area, and urban/rural characteristics. Each permanent site is associated with one of the ten TPGs listed below.

TRAFFIC PATTERN GROUP	DESCRIPTION
TPG 1	URBAN - INTERSTATE
TPG 2	RURAL - INTERSTATE
TPG 3	URBAN - OTHER PRINCIPAL ARTERIALS
TPG 4	RURAL - OTHER PRINCIPAL ARTERIALS
TPG 5	URBAN - MINOR ARTERIALS, COLLECTORS, LOCAL ROADS
TPG 6	NORTH RURAL - MINOR ARTERIALS
TPG 7	CENTRAL RURAL- MINOR ARTERIALS
TPG 8	NORTH RURAL - COLLECTORS AND LOCAL ROADS
TPG 9	CENTRAL RURAL- COLLECTORS AND LOCAL ROADS
TPG 10	SPECIAL RECREATIONAL

Permanent Site data is used in computing:

- Daily, monthly, and seasonal adjustment factors by highway functional classification and geographic location.
- Yearly growth factors which are used to update older counts in the Department's Roadway Management System (RMS).
- Design hour factors (peak hour, 30th highest, and 50th highest hour) used for the design of highways.

Permanent Site Locations

This chart lists the permanent site stations by number, county, municipality, traffic route number, state route (SR), segment, and also by a physical description of where the permanent site is located in the state.

SITE #	COUNTY	MUNICIPALITY	ROUTE	SR	SEGMENT	LOCATION
1	Erie	Springfield Twp.	US 20	20	10	0.4 mi. E of Ohio/Pennsylvania Line (West Springfield)
2	Crawford	Richmond Twp.	PA 77	77	270	0.5 mi. W of PA 408 (New Richmond)
3	Clearfield	Huston Twp.	PA 255	255	280	1.4 mi. N of PA 153 (Penfield)
4 *	Tioga	Delmar Twp.	US 6	6	400	0.9 mi. W of PA 287 (Wellsboro)
5	Bradford	Wysox Twp.	***	1043	10	0.1 mi. NW of SR 1041 (Towanda)
6	Clearfield	Lawrence Twp.	PA 879	879	200	1.0 mi. SW of SR 1001 (Hyde)
7	Wyoming	Eaton Twp.	PA 29	29	260	2.2 mi. S of US 6 (Tunkhannock)
8 *	Montgomery	Whitemarsh Twp.	PA 73	73	534	1.4 mi. NW of PA 309-Skipack Pike (Whitemarsh)
9	Bucks	West Rockhill Twp.	PA 563	563	50	0.4 mi. S of SR 4033 (Perkasie)
10	Chester	Lower Oxford Twp.	PA 10	10	60	0.6 mi. N of US 1 (Oxford)
11	Elk	Fox Twp.	PA 948	948	40	1.4 mi. W of PA 225 (Kersey)
15	Fulton	Todd Twp.	US 522	522	540	1.3 mi. N of US 30 (McConnellsburg)
18	Butler	Summitt Twp.	PA 38	38	20	0.7 mi. NW of PA 68 (Butler)
19	Washington	Union Twp.	PA 88	88	750	0.4 mi. S of SR 1006 (Finleyville)
20	Lawrence	Shenango Twp.	PA 65	65	264	0.6 mi. S of US 422 (New Castle)
24	Westmoreland	Derry Twp.	US 22	22	340	1.0 mi. E of PA 981 (New Alexandria)
27	Elk	Highland Twp.	PA 66/948	66	60	1.1 mi. E of PA 948 (Russell City)
29	Susquehanna	Rush Twp.	PA 267	267	190	0.9 mi. S of PA 706 (Lawton)
40	Schuylkill	Schuylkill Twp.	US 209	209	860	0.6 mi. S of PA 309 (Tamaqua)
48	Susquehanna	New Milford Twp.	US 11	11	420	0.8 mi. S of PA 848 (New Milford)
51	Potter	Eulalia Twp.	PA 44	44	700	1.3 mi. SW of PA 49 (Coudersport)
106 **	Berks	Windsor Twp.	I-78	78	330	2.3 mi. W of PA 143 (Hamburg)
126	Jefferson	Brookville Boro.	I-80	80	790	0.6 mi. E of PA 36 (Brookville)
158 **	Centre	Boggs Twp.	I-80	80	1580	0.6 mi. E of PA 150 (Milesburg)
203	Allegheny	Leetsdale Boro.	PA 65	65	270	1.0 mi. S of SR 4036 (Leetsdale)
205	York	Manchester Twp.	I-83	83	220	1.4 mi. S of PA 238 (North York)
206 *	Cumberland	Wormleysburg Boro.	***	1014	30	Harvey Taylor Bridge on west approach (Harvey Taylor Bridge)
207 *	Erie	Springfield Twp.	I-90	90	10	1.1 mi. E of Ohio/Pennsylvania Line (West Springfield)
208 *	Allegheny	Churchill Boro.	I-376	376	794	0.7 mi. W of PA 791 (Monroeville)
216	Susquehanna	Great Bend Twp.	I-81	81	2314	1.1 mi. N of PA 171 (Hallstead)
301 *	Erie	Lawrence Park Twp.	PA 5	5	680	0.5 mi. W of PA 955 (Erie)
304 *	Lycoming	S. Williamsport Boro.	US 15	15	250	0.3 mi. S of I-180 (Williamsport)
306	Pike	Palmyra Twp.	PA 507	507	280	0.9 mi. S of US 6 (Hawley)
317 **	Blair	Freedom Twp.	I-99	99	214	1.0 mi. S of PA 36/PA 164 (East Freedom)

* Indicates ATR site

** Indicates WIM site

*** Indicates road is not a PA, US, or Interstate Route

Permanent Site Locations (Continued)

SITE #	COUNTY	MUNICIPALITY	ROUTE	SR	SEGMENT	LOCATION
323	Bedford	Bedford Twp.	US 220	220	310	0.7 mi. S of Business US 220 (Bedford Springs)
324 **	Elk	Ridgway Boro.	PA 120	120	42	1.1 mi. E of US 219 (Ridgway)
326	Clarion	Paint Twp.	US 322	322	280	0.5 mi. E of PA 66 (Clarion)
328	Centre	Boggs Twp.	PA 150	150	194	1.1 mi. N of I -80 (Milesburg)
330 *	Bucks	Northampton Twp.	PA 532	532	130	1.4 mi. SW of PA 413 (Newtown)
334	York	W. Manchester Twp.	US 30	30	170	0.7 mi. W of PA 116 (Thomasville)
349 *	Lehigh	Upper Saucon Twp.	PA 309	309	30	0.7 mi. S of PA 378 (Coopersburg)
360	Clearfield	Bloom Twp.	US 219	219	670	3.2 mi. S of US 322 (Luthersburg)
362	York	North Codorus Twp.	PA 616	616	240	1.6 mi. N of PA 214 (New Salem)
363	McKean	Lafayette Twp.	US 219	219	290	0.1 mi. N of PA 59 (Lewis Run)
364	Lackawanna	Newton Twp.	PA 307	307	360	50 ft. W of SR 4017 (Clarks Summit)
367	Union	West Buffalo Twp.	PA 45	45	250	0.6 mi. W of PA 104 (Mifflinburg)
370	Westmoreland	Rostraver Twp.	I-70	70	450	0.9 mi. W of PA 51 (Belle Vernon)
371	Fulton	Brush Creek Twp.	I-70	70	1522	1.1 mi. S of PA 915 (Crystal Springs)
372	Union	White Deer Twp.	I-80	80	2104	0.7 mi. E of US 15 (Milton)
374	Butler	Lancaster Twp.	I-79	79	904	2.2 mi. N of PA 68 (Zelienople)
375	Allegheny	N. Fayette Twp.	US 22/30	22	80	0.8 mi. E of PA 978 (Imperial)
376	Luzerne	Wilkes-Barre Twp.	I-81	81	1664	1.7 mi. N of PA 309-Exit 165A/165B (Wilkes-Barre)
377	Bucks	Bristol Twp.	I-295	295	404	2.5 mi. S of US 1 (PennDel)
378	Fayette	Redstone Twp.	US 40	40	160	1.0 mi. W of SR 4010 (Briar Hill)
379	Blair	Logan Twp.	***	4013	80	0.5 mi. E of SR 4015 (Altoona)
380	Berks	Exeter Twp.	PA 562	562	40	0.2 mi. W of SR 2033 (St. Lawrence)
381	Mercer	Hermitage City	***	3019	20	0.9 mi. N of PA 718 (Sharon)
382	Cambria	Lower Yoder Twp.	***	3005	40	0.7 mi. SW of PA 56 (Morrellville)
383	Clinton	Pine Creek Twp.	PA 150	150	360	0.5 mi. N of SR 1005 (Chatham Run)
384	Tioga	Lawence Twp.	***	4022	50	1.9 mi. E of PA 49 (Nelson)
385	Warren	Southwest Twp.	***	3002	30	0.7 mi. W of PA 27 (Enterprise)
386	Montour	Limestone Twp.	PA 254	254	10	2.0 mi. E of I-80 (Limestoneville)
387	Somerset	Brothers Valley Twp.	***	2031	120	2.0 mi. S of US 219 (Garrett)
388	Monroe	Ross Twp.	***	3004	170	0.4 mi. SW of SR 3015 (Saylorburg)
389	Jefferson	Perry Twp.	PA 536	536	210	0.3 mi. W of SR 3011 (Frostburg)
390	Lancaster	Mount Joy Twp.	PA 230	230	20	1.7 mi. W of PA 743/PA 241 (Elizabethtown)
391	Chester	Warwick Twp.	PA 23	23	110	1.5 mi. E of PA 345 (Warwick Area)
392 *	Luzerne	Foster Twp.	I-80	80	2684	5.9 mi. E of PA 309 (White Haven)
393	Washington	Donegal Twp.	I-70	70	2	0.3 mi. E of W. Virginia/Pennsylvania Line (West Alexander)
394	Lehigh	Upper Saucon Twp.	I-78	78	614	1.1 mi. E of PA 309/PA 145/I-78 Interchange (Allentown)
395	Fayette	German Twp.	PA 21	21	230	0.1 mi. E of SR 3023 (Uniontown)

* Indicates ATR site

** Indicates WIM site

*** Indicates road is not a PA, US, or Interstate Route

Permanent Site Locations (Continued)

SITE #	COUNTY	MUNICIPALITY	ROUTE	SR	SEGMENT	LOCATION
396 *	Washington	Canton Twp.	US 40	40	320	0.4 mi E of SR 3013 (Washington)
410 *	Tioga	Nelson Twp.	PA 49	49	520	0.5 mi. W of SR 4027 (Nelson)
501 **	Tioga	Liberty Twp.	US 15	15	142	2.7 mi. N of SR 2005 (Blossburg)
502 **	Mercer	Wolf Creek Twp.	I-80	80	220	1.4 mi. W of PA 173 (Barkeyville)
503 **	Warren	Youngsville Boro.	US 6	6	420	0.6 mi. E of Railroad St (Youngsville)
504 **	Delaware	Chadds Ford Twp.	US 202	202	114	0.8 mi. N of US 1 (Dilworthtown)
505 **	Perry	Howe Twp.	US 22	22	160	0.7 mi. E of PA 34 (Newport)
506 **	Blair	Allegheny Twp.	***	1001	30	0.2 mi. N of SR 1002 (Altoona)
600	Franklin	Southampton Twp.	I-81	81	244	0.7 mi. N of PA 696 (Shippensburg)
700 **	Indiana	Armstrong Twp.	US 422	422	120	0.5 mi. W of SR 4004 (Indiana)
701 **	Dauphin	East Hanover Twp.	I-81	81	774	0.75 mi. N of PA 39 Manada Hill/Hershey Interchange (Grantville)
702 **	Dauphin	East Hanover Twp.	I-81	81	810	0.7 mi. N of SR 2025 (Grantville)
703 **	Lancaster	Brecknock Twp.	US 222	222	1034	0.3 mi. S of Lancaster/Berks County Line (Adamstown)
704 **	Fulton	Bethel Twp.	I-70	70	1702	0.1 mi. N of Maryland/Pennsylvania Line (Warfordsburg)
705 **	Northampton	Williams Twp.	I-78	78	724	1.0 mi. E of SR 33 (Easton)
706 **	Greene	Perry Twp.	I-79	79	14	1.0 mi. N of SR 2002 (Mt. Morris)
709 **	Columbia	Mifflin Twp.	I-80	80	2444	2.7 mi. E of PA 339 (Columbia)
710 **	Butler	Cranberry Twp.	I-79	79	790	1.2 mi. N of PA 228 (Butler)
712 **	Franklin	Antrim Twp.	I-81	81	64	1.75 Mi. N of PA 16 (Greencastle)
800	Centre	Spring Twp.	I-99	99	800	1.2 mi. N of PA 150 (Bellefonte)
801	Dauphin	Lower Paxton Twp.	I-81	81	714	0.7 mi. S of SR 3019 (Paxtonia)
802	Monroe	Coolbaugh Twp.	PA 423	423	140	0.2 mi. E of I-380 (Tobyhanna)
803	Adams	Freedom Twp.	US 15	15	20	0.5 mi. N of Maryland/Pennsylvania Line (Gettysburg)
804	Washington	Canton Twp.	I-70	70	154	1.3 mi. E of US 40 (Washington)
805	Crawford	N. Shenango Twp.	PA 285	285	20	0.1 mi. E of SR 3007 (Espyville)
806	Westmoreland	Hempfield Twp.	US 30	30	170	0.2 mi. E of Strawberry Lane (Jeannette)
807	Washington	Twilight Boro.	I-70	70	390	0.6 mi. W of Exit 39 (Speers)
808	Indiana	W. Wheatfield Twp.	US 22	22	242	0.1 mi. E of Bethel Cemetery Rd. (Clyde)
809	McKean	Foster Twp.	US 219	219	594	0.1 mi. N of Tuna Crossroads Bridge (Foster Brook)
810	Bucks	Doylestown Twp.	US 611	611	130	0.3 mi. S of SR 4202 (Doylestown)
811	Cumberland	Hampden Twp.	PA 581	581	10	Between the I-81 Junction and Creekview Rd. Exit (Creekview)
812	Westmoreland	S. Greenburg Twp.	US 30	30	300	Between Exits for SR 119 and Cedar St. (Cedar Creek)
813	Cumberland	Camp Hill Boro.	PA 581	581	120	Between US 11/15 and I-83 (Camp Hill)
815	Columbia	Hemlock Twp.	PA 44	44	10	0.25 mi. W of PA 42 (Buckhorn)
816	Lebanon	South Annville Twp.	PA 241	241	120	1.1 mi. S of US 322 (Mt. Gretna)
817	Jefferson	Winslow Twp.	***	1002	70	0.1 mi. E of SR 2033 (Reynoldsville)
818	Pike	Matamoras Boro.	I-84	84	540	0.1 mi. W of New York/Pennsylvania Line (Matamoras)

* Indicates ATR site

** Indicates WIM site

*** Indicates road is not a PA, US, or Interstate Route

Permanent Site Locations (Continued)

SITE #	COUNTY	MUNICIPALITY	ROUTE	SR	SEGMENT	LOCATION
821	Tioga	Lawrence Twp.	US 15	15	774	0.1 mi. S of T-722 Tioga River Rd overpass (Lawrence)
822	Dauphin	Swatara Twp.	PA 300	300	30	0.8 mi. W of PA 441 (Highspire)
823	Dauphin	Swatara Twp.	PA 283	283	4	1.1 mi. S of SR 441 (Swatara)
824	Chester	Uwchlan Twp.	PA 100	100	260	Between SR 1001 and PA 113 (Exton)
825	York	Shrewsbury Twp.	I-83	83	2	0.2 mi. N of Maryland/Pennsylvania Line (New Freedom)
826	Berks	Exeter Twp.	US 422	422	450	0.7 mi. E of I-176 (Exeter)
827	Union	White Deer Twp.	US 15	15	320	1.1 mi. N of SR 1004 (New Columbia)
828	Crawford	Vernon Twp.	I-79	79	1500	3.3 mi. N of US 6 (Meadville)
829	Mercer	Shenango Twp.	I-80	80	24	1.3 mi. W of I-376 (West Middlesex)
830	Cumberland	Middlesex Twp.	I-81	81	490	1.0 mi. N of PA 641 (Carlisle)
831	Cumberland	Silver Spring Twp.	I-81	81	550	1.4 mi. S of PA 114 (Silver Spring)
832	Berks	Robeson Twp.	I-176	176	74	At Morgantown Rd Overpass (Green Hills)
833	Cumberland	E. Pennsboro Twp.	I-81	81	634	0.8 mi. North of PA 944 (Enola)
834	Erie	North East Twp.	I-90	90	450	0.5 mi. E of US 20 (North East)
835	Erie	Greenfield Twp.	I-86	86	60	2.4 mi. E of PA 89 (Erie South Tier)
836	Mercer	Findley Twp.	I-80	80	164	2.4 mi. W. of I-79 (Mercer)
837	Schuylkill	Kline Twp.	I-81	81	1364	2.5 mi. N of SR 1017 (Delano)
838	Beaver	Brighton Twp.	I-376	376	344	1.2 mi. W of PA 4035 (Brighton)
839	Monroe	Coolbaugh Twp.	I-380	380	70	Between Exits for SR 940 and SR 423 (Pocono Summit)
840	Allegheny	Ross Twp.	I-279	279	86	0.4 mi. N of SR 4021 (Franklin Park)
841	Cumberland	Lower Allen Twp.	I-83	83	400	0.5 mi. S of Exit 40B (New Cumberland)
842	Northumberland	Delaware Twp.	I-180	180	580	At PA 44 overpass (Warrior Run)
843	Union	White Deer Twp.	I-80	80	2060	3.83 mi. W of US 15 (White Deer)
844	Lackawanna	South Abington Twp.	I-81	81	1930	0.6 mi. N of US 11 (Dickson City)
845	Blair	Allegheny Twp.	I-99	99	290	0.7 mi. N of SR 8004 (Holidaysburg)
846	Cumberland	Upper Allen Twp.	***	2013	40	0.7 mi. E of Winding Hill Rd (Winding Hill)
848	Adams	Straban Twp.	US 15	15	250	1.7 mi. N of US 30 (Huntertown)
849	Crawford	Summit Twp.	PA 618	618	72	0.3 mi. S of PA 18 (Conneaut Lake)
850	Berks	Penn Twp.	PA 183	183	210	0.3 mi. N of SR 3006 (Bernville)
851	Northampton	Lower Nazareth Twp.	PA 33	33	50	0.7 mi. S of PA 248 (Nazareth)
853	Bucks	Haycock Twp.	PA 563	563	563	3.0 mi. W of PA 412 (Lake Nockamixon)
854	York	West Manheim Twp.	PA 216	216	60	0.3 mi. E of SR 3045 (Lake Marburg)
855	Huntingdon	Penn Twp.	***	3011	110	0.3 mi. S of PA 26 (Raystown)
856	Cambria	White Twp.	***	1026	40	3.8 mi. W of PA 53 (Glendale Lake)
985	Cambria	Richland Twp.	US 219	219	120	1.6 mi. N of PA 56 (St. Michael)

* Indicates ATR site

** Indicates WIM site

*** Indicates road is not a PA, US, or Interstate Route

Long-Term Pavement Performance Program (LTPP)

The Long Term Pavement Performance (LTPP) program was established under the Strategic Highway Research Program (SHRP). The first five years of the LTPP program were funded and managed under SHRP. Beginning in 1991, the Federal Highway Administration (FHWA) has sustained the management and funding of the program.

The Federal Highway Administration assumed coordination of a national program to move the products evaluated or developed under SHRP to the state and local agencies upon completion of the research phase.

LTPP, which is a study of in-service pavements, provides the basis for pavement design, maintenance, rehabilitation, and construction methodologies. The LTPP program monitors and collects pavement performance data on all active LTPP sites. The Bureau supports this program by collecting weight and vehicle classification data and reporting the data to LTPP.

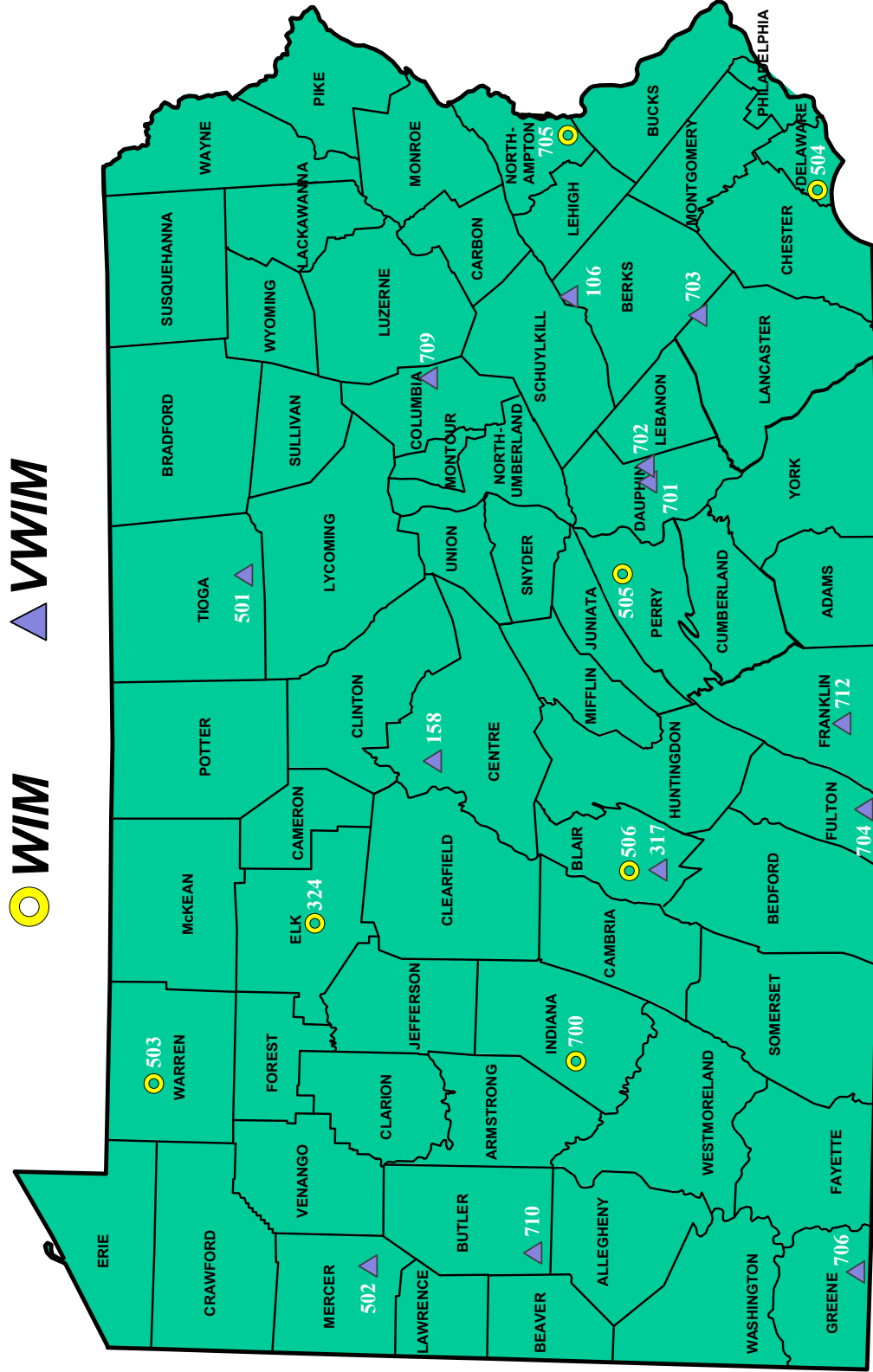
ATR, CAVC and WIM Locations Map (Opposite)

The ATR, CAVC, and WIM location maps of Pennsylvania, which are shown on the following two pages, give an overview of where all of the 143 ATR, CAVC and WIM sites are located. Symbols are used in addition to the site number to identify the location of the site.



CAVC 848 Sensor Array on SR 15 in Adams County

CONTINUOUS MONITORING SITES



Permanent Site Locations by Traffic Pattern Group (TPG)

This chart groups the permanent site locations by Traffic Pattern Group. It gives the permanent site number, route, and the urban area or county depending on the TPG into which the permanent site falls. The Annual Average Daily Traffic (AADT) for each permanent site is also listed on this chart. Of the 143 sites in Pennsylvania, 122 were used to calculate the AADT.

PERMANENT SITE LOCATIONS BY TPG							
TPG 1: URBAN INTERSTATE				TPG 2: RURAL INTERSTATE			
SITE #	ROUTE	URBAN AREA	AADT	SITE #	ROUTE	COUNTY	AADT
205	I-83	YORK	48,723	106	I-78	BERKS	35,827
208	I-376	PITTSBURGH	76,171	126	I-80	JEFFERSON	23,132
216	I-81	BINGHAMTON	21,317	371	I-70	FULTON	15,103
317	I-99	ALTOONA	11,856	393	I-70	WASHINGTON	28,708
370	I-70	MONESSEN	25,949	502	I-80	MERCER	24,760
372	I-80	UNION	27,006	600	I-81	FRANKLIN	35,814
374	I-79	PITTSBURGH	27,513	705	I-78	NORTHAMPTON	58,501
377	I-295	PHILADELPHIA	45,871	706	I-79	GREENE	20,638
394	I-78	ALLENTOWN	55,957	709	I-80	COLUMBIA	27,683
701	I-81	HARRISBURG	54,458	712	I-81	FRANKLIN	42,383
702	I-81	HARRISBURG	51,887	800	I-99	CENTRE	19,684
801	I-81	HARRISBURG	69,787	807	I-70	WASHINGTON	23,741
804	I-70	PITTSBURGH	42,655	825	I-83	YORK	35,944
818	I-84	PORT JERVIS	26,420	828	I-79	CRAWFORD	15,099
823	I-283	HARRISBURG	44,618	829	I-80	MERCER	26,305
830	I-81	HARRISBURG	54,411	834	I-90	ERIE	15,230
831	I-81	HARRISBURG	58,466	836	I-80	MERCER	25,152
832	I-176	READING	17,230	837	I-81	SCHUYLKILL	21,669
833	I-81	HARRISBURG	58,598	838	I-376	BEAVER	19,334
840	I-279	PITTSBURGH	38,333	839	I-380	MONROE	23,093
841	I-83	HARRISBURG	59,581	842	I-180	NORTHUMBERLAND	13,561
845	I-99	ALTOONA	29,805	843	I-80	UNION	20,081

Permanent Site Locations by TPG (Continued)

PERMANENT SITE LOCATIONS BY TPG							
TPG 3: URBAN PRINCIPAL ARTERIAL				TPG 4: RURAL PRINCIPAL ARTERIAL			
SITE #	ROUTE	URBAN AREA	AADT	SITE #	ROUTE	COUNTY	AADT
8	PA 73	PHILADELPHIA	14,940	4	US 6	TIOGA	2,301
203	PA 65	PITTSBURGH	17,107	19	PA 88	WASHINGTON	4,675
206	H. Taylor Br.	HARRISBURG	19,888	24	US 22	WESTMORELAND	17,437
301	PA 5	ERIE	11,200	323	US 220	BEDFORD	3,920
304	US 15	WILLIAMSPORT	25,126	360	US 219	CLEARFIELD	2,496
326	US 322	CLARION	7,348	363	US 219	MCKEAN	4,024
330	PA 532	PHILADELPHIA	8,504	378	US 40	FAYETTE	6,877
334	US 30	YORK	13,998	808	US 22	INDIANA	11,945
349	PA 309	ALLENTOWN	31,363	809	US 219	MCKEAN	6,385
375	US 22	PITTSBURGH	22,903	821	US 15	TIOGA	8,677
396	US 40	PITTSBURGH	10,258	851	PA 33	NORTHAMPTON	63,960
803	US 15	EMMITSBURG	18,148	985	US 219	CAMBRIA	16,269
806	US 30	GREENSBURG	25,537				
810	PA 611	DOYLESTOWN	28,306				
811	PA 581	HARRISBURG	42,164				
812	US 30	GREENSBURG	37,069				
813	PA 581	HARRISBURG	78,163				
824	PA 100	PHILADELPHIA	29,937				
826	US 422	READING	42,297				
827	US 15	MILTON	18,379				
848	US 15	HANOVER	19,168				

PERMANENT SITE LOCATIONS BY TPG							
TPG 5: URBAN MINOR ARTERIAL/COLLECTOR				TPG 6: NORTH RURAL MINOR ARTERIAL			
SITE #	ROUTE	URBAN AREA	AADT	SITE #	ROUTE	COUNTY	AADT
18	PA 38	BUTLER	5,271	2	PA 77	CRAWFORD	1,876
20	PA 65	NEW CASTLE	6,294	3	PA 255	CLEARFIELD	4,864
380	PA 562	READING	6,742	27	PA 66	ELK	2,489
381	SR 3019	YOUNGSTOWN	335	48	US 11	SUSQUEHANNA	4,596
390	PA 230	LANCASTER	6,939	51	PA 44	POTTER	2,702
506	SR 1001	ALTOONA	14,783	324	PA 120	ELK	3,974
815	PA 44	BLOOMSBURG	3,308	328	PA 150	CENTRE	4,488
846	SR 2013	HARRISBURG	3,827	410	PA 49	TIOGA	3,861

Permanent Site Locations by TPG (Continued)

PERMANENT SITE LOCATIONS BY TPG							
TPG 7: CENTRAL RURAL MINOR ARTERIAL				TPG 8: NORTH RURAL COLLECTOR			
SITE #	ROUTE	COUNTY	AADT	SITE #	ROUTE	COUNTY	AADT
1	US 20	ERIE	3,655	5	SR 1043	BRADFORD	1,602
15	US 522	FULTON	4,616	29	PA 267	SUSQUEHANNA	1,234
40	US 209	SCHUYLKILL	3,958	383	PA 150	CLINTON	3,202
367	PA 45	UNION	5,457	384	SR 4022	TIOGA	460
391	PA 23	CHESTER	7,196	385	SR 3002	WARREN	1,641
850	PA 183	BERKS	13,232	802	PA 423	MONROE	4,910
853	PA 563	BUCKS	3,792	817	SR 1002	JEFFERSON	1,577

PERMANENT SITE LOCATIONS BY TPG							
TPG 9: CENTRAL RURAL COLLECTOR				TPG 10: SPECIAL RECREATIONAL			
SITE #	ROUTE	COUNTY	AADT	SITE #	ROUTE	COUNTY	AADT
362	PA 616	YORK	5,572	306	PA 507	PIKE	5,473
364	PA 307	LACKAWANNA	4,310	805	PA 285	CRAWFORD	2,759
379	SR 4013	BLAIR	1,250	849	PA 618	CRAWFORD	1,664
382	SR 3005	CAMBRIA	1,422	855	SR 3011	HUNTINGDON	1,909
386	PA 254	MONTOUR	2,178	856	SR 1026	CAMBRIA	981
387	SR 2031	SOMERSET	504				
388	SR 3004	MONROE	2,350				
389	PA 536	JEFFERSON	1,712				
816	PA 241	LEBANON	2,852				
854	PA 216	YORK	8,170				

2020 Peak Hour by Traffic Pattern Group (TPG)

2020 Peak Hour by Traffic Pattern Group (TPG)													
TPG 1: Urban Interstate							TPG 2: Rural Interstate						
Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT	Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT
205	2/28	4:00 PM	Fri	5,479	11.25%	48,723	106	8/7	1:00 PM	Fri	3,559	9.93%	35,827
208	3/6	5:00 PM	Fri	8,258	10.84%	76,171	126	9/4	3:00 PM	Fri	2,501	10.81%	23,132
216	8/23	1:00 PM	Sun	3,285	15.41%	21,317	371	7/5	1:00 PM	Sun	2,578	17.07%	15,103
317	3/6	4:00 PM	Fri	1,618	13.65%	11,856	393	9/4	3:00 PM	Fri	2,871	10.00%	28,708
370	9/4	3:00 PM	Fri	2,917	11.24%	25,949	502	7/5	1:00 PM	Sun	2,962	11.96%	24,760
372	3/6	4:00 PM	Fri	2,977	11.02%	27,006	600	10/9	2:00 PM	Fri	3,683	10.28%	35,814
374	9/4	3:00 PM	Fri	3,963	14.40%	27,513	705	9/5	12:00 PM	Sat	5,616	9.60%	58,501
377	3/2	7:00 AM	Mon	6,033	13.15%	45,871	706	9/4	4:00 PM	Fri	2,495	12.09%	20,638
394	1/23	4:00 PM	Thu	6,165	11.02%	55,957	709	8/14	2:00 PM	Fri	3,339	12.06%	27,683
701	2/28	4:00 PM	Fri	5,614	10.31%	54,458	712	2/28	4:00 PM	Fri	4,295	10.13%	42,383
702	3/6	4:00 PM	Fri	5,376	10.36%	51,887	800	3/6	3:00 PM	Fri	2,887	14.67%	19,684
801	2/28	4:00 PM	Fri	7,779	11.15%	69,787	807	2/21	4:00 PM	Fri	2,811	11.84%	23,741
804	3/6	4:00 PM	Fri	4,382	10.27%	42,655	825	2/28	5:00 PM	Fri	3,915	10.89%	35,944
818	7/3	1:00 PM	Fri	3,101	11.74%	26,420	828	9/4	4:00 PM	Fri	2,135	14.14%	15,099
823	2/14	3:00 PM	Fri	4,741	10.63%	44,618	829	9/7	1:00 PM	Mon	2,791	10.61%	26,305
830	3/6	3:00 PM	Fri	5,864	10.78%	54,411	834	7/5	1:00 PM	Sun	1,960	12.87%	15,230
831	3/6	3:00 PM	Fri	5,995	10.25%	58,466	836	9/7	1:00 PM	Mon	2,900	11.53%	25,152
832	1/15	7:00 AM	Wed	2,396	13.91%	17,230	837	10/9	3:00 PM	Fri	2,420	11.15%	21,669
833	3/5	4:00 PM	Thu	7,896	13.47%	58,598	838	1/17	3:00 PM	Fri	2,523	13.05%	19,334
840	1/14	5:00 PM	Tue	5,504	14.36%	38,333	839	8/23	1:00 PM	Sun	2,925	12.67%	23,093
841	2/28	4:00 PM	Fri	6,741	11.31%	59,581	842	9/4	4:00 PM	Fri	1,614	11.90%	13,561
845	3/6	4:00 PM	Fri	4,008	13.45%	29,805	843	11/29	1:00 PM	Sun	2,319	11.55%	20,081

2020 Peak Hour by Traffic Pattern Group (TPG)													
TPG 3: Urban Principal Arterial							TPG 4: Rural Principal Arterial						
Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT	Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT
8	3/3	7:00 AM	Tue	2,281	15.27%	14,940	4	10/10	3:00 PM	Sat	425	18.47%	2,301
203	1/15	4:00 PM	Wed	2,150	12.57%	17,107	19	3/13	4:00 PM	Fri	682	14.59%	4,675
206	1/23	4:00 PM	Thu	3,629	18.25%	19,888	24	3/6	3:00 PM	Fri	2,177	12.48%	17,437
301	3/5	4:00 PM	Thu	1,432	12.79%	11,200	323	9/4	4:00 PM	Fri	507	12.93%	3,920
304	2/21	4:00 PM	Fri	2,921	11.63%	25,126	360	9/1	4:00 PM	Tue	316	12.66%	2,496
326	10/14	4:00 PM	Wed	988	13.45%	7,348	363	7/23	3:00 PM	Thu	543	13.49%	4,024
330	3/2	8:00 AM	Mon	1,165	13.70%	8,504	378	1/31	4:00 PM	Fri	826	12.01%	6,877
334	2/22	12:00 PM	Sat	1,480	10.57%	13,998	808	1/5	2:00 PM	Sun	1,670	13.98%	11,945
349	1/30	4:00 PM	Thu	3,219	10.26%	31,363	809	2/21	4:00 PM	Fri	885	13.86%	6,385
375	10/23	4:00 PM	Fri	2,268	9.90%	22,903	821	9/7	2:00 PM	Mon	1,169	13.47%	8,677
396	12/23	1:00 PM	Wed	1,217	11.86%	10,258	851	2/14	3:00 PM	Fri	6,765	10.58%	63,960
803	10/3	4:00 PM	Sat	2,214	12.20%	18,148	985	1/15	4:00 PM	Wed	2,047	12.58%	16,269
806	9/3	4:00 PM	Thu	2,836	11.11%	25,537							
810	1/30	5:00 PM	Thu	3,581	12.65%	28,306							
811	2/11	4:00 PM	Tue	5,423	12.86%	42,164							
812	12/23	4:00 PM	Wed	4,419	11.92%	37,069							
813	2/20	7:00 AM	Thu	7,928	10.14%	78,163							
824	1/9	5:00 PM	Thu	3,946	13.18%	29,937							
826	3/13	4:00 PM	Fri	4,772	11.28%	42,297							
827	2/14	4:00 PM	Fri	2,172	11.82%	18,379							
848	10/16	4:00 PM	Fri	2,163	11.28%	19,168							

2020 Peak Hour by TPG (Continued)

2020 Peak Hour by Traffic Pattern Group (TPG)													
TPG 5: Urban Minor Arterial/Collector							TPG 6: North Rural Minor Arterial						
Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT	Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT
18	10/2	4:00 PM	Fri	779	14.78%	5,271	2	8/22	2:00 PM	Sat	337	17.96%	1,876
20	9/18	4:00 PM	Fri	710	11.28%	6,294	3	10/10	3:00 PM	Sat	802	16.49%	4,864
380	10/8	5:00 PM	Thu	892	13.23%	6,742	27	10/10	11:00 AM	Sat	571	22.94%	2,489
381	1/9	3:00 PM	Thu	54	16.12%	335	48	8/29	11:00 AM	Sat	605	13.16%	4,596
390	1/15	4:00 PM	Wed	869	12.52%	6,939	51	9/3	4:00 PM	Thu	343	12.69%	2,702
506	12/23	12:00 PM	Wed	1,735	11.74%	14,783	324	9/23	3:00 PM	Wed	642	16.16%	3,974
815	12/15	4:00 PM	Tue	423	12.79%	3,308	328	10/9	3:00 PM	Fri	574	12.79%	4,488
846	2/27	7:00 AM	Thu	623	16.28%	3,827	410	9/4	4:00 PM	Fri	492	12.74%	3,861

2020 Peak Hour by Traffic Pattern Group (TPG)													
TPG 7: Central Rural Minor Arterial							TPG 8: North Rural Collector						
Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT	Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT
1	6/20	1:00 PM	Sat	554	15.16%	3,655	5	3/9	4:00 PM	Mon	331	20.66%	1,602
15	10/17	1:00 PM	Sat	617	13.37%	4,616	29	11/27	11:00 AM	Fri	184	14.91%	1,234
40	7/16	5:00 PM	Thu	445	11.24%	3,958	383	9/3	4:00 PM	Thu	390	12.18%	3,202
367	8/6	5:00 PM	Thu	714	13.08%	5,457	384	10/6	3:00 PM	Tue	86	18.70%	460
391	10/9	3:00 PM	Fri	933	12.97%	7,196	385	7/31	4:00 PM	Fri	235	14.32%	1,641
850	9/25	3:00 PM	Fri	1,511	11.42%	13,232	802	9/11	3:00 PM	Fri	925	18.84%	4,910
853	5/2	2:00 PM	Sat	693	18.28%	3,792	817	10/15	4:00 PM	Thu	235	14.90%	1,577

2020 Peak Hour by Traffic Pattern Group (TPG)													
TPG 9: Central Rural Collector							TPG 10: Special Recreational						
Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT	Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT
362	9/10	4:00 PM	Thu	648	11.63%	5,572	306	9/6	1:00 PM	Sun	924	16.88%	5,473
364	9/25	4:00 PM	Fri	557	12.92%	4,310	805	5/23	1:00 PM	Sat	785	28.45%	2,759
379	3/9	4:00 PM	Mon	171	13.68%	1,250	849	7/3	1:00 PM	Fri	296	17.79%	1,664
382	3/6	4:00 PM	Fri	228	16.03%	1,422	855	7/19	5:00 PM	Sun	421	22.05%	1,909
386	9/4	4:00 PM	Fri	309	14.19%	2,178	856	7/5	2:00 PM	Sun	237	24.16	981
387	6/1	2:00 PM	Mon	115	22.82%	504							
388	2/28	4:00 PM	Fri	330	14.04%	2,350							
389	10/16	3:00 PM	Fri	239	13.96%	1,712							
816	1/16	4:00 PM	Thu	494	17.32%	2,852							
854	6/23	3:00 PM	Sat	1,028	12.58%	8,170							

2020 30th Highest Hour by Traffic Pattern Group (TPG)

2020 30th Highest Hour by Traffic Pattern Group													
TPG 1: Urban Interstate							TPG 2: Rural Interstate						
Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT	Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT
205	1/29	7:00 AM	Wed	5,126	10.52%	48,723	106	8/14	11:00 AM	Fri	3,235	9.03%	35,827
208	1/14	6:00 PM	Tue	7,661	10.06%	76,171	126	8/23	1:00 PM	Sun	2,320	10.03%	23,132
216	9/4	4:00 PM	Fri	2,609	12.24%	21,317	371	9/7	3:00 PM	Mon	2,071	13.71%	15,103
317	1/5	3:00 PM	Sun	1,395	11.77%	11,856	393	9/25	4:00 PM	Fri	2,690	9.37%	28,708
370	3/5	3:00 PM	Thu	2,730	10.52%	25,949	502	7/5	11:00 AM	Sun	2,560	10.34%	24,760
372	8/14	1:00 PM	Fri	2,702	10.01%	27,006	600	6/26	4:00 PM	Fri	3,441	9.61%	35,814
374	8/7	4:00 PM	Fri	3,590	13.05%	27,513	705	2/17	2:00 PM	Mon	5,222	8.93%	58,501
377	1/9	5:00 PM	Thu	5,586	12.18%	45,871	706	12/23	3:00 PM	Wed	2,170	10.51%	20,638
394	2/19	4:00 PM	Wed	5,704	10.19%	55,957	709	9/7	1:00 PM	Mon	2,859	10.33%	27,683
701	10/9	2:00 PM	Fri	4,961	9.11%	54,458	712	1/17	5:00 PM	Fri	3,936	9.29%	42,383
702	2/14	2:00 PM	Fri	4,782	9.22%	51,887	800	2/13	7:00 AM	Thu	2,642	13.42%	19,684
801	2/4	4:00 PM	Tue	7,009	10.04%	69,787	807	2/18	5:00 PM	Tue	2,560	10.78%	23,741
804	7/2	4:00 PM	Thu	4,093	9.60%	42,655	825	1/17	3:00 PM	Fri	3,485	9.70%	35,944
818	9/25	3:00 PM	Fri	2,778	10.51%	26,420	828	8/23	1:00 PM	Sun	1,937	12.83%	15,099
823	1/24	3:00 PM	Fri	4,375	9.81%	44,618	829	10/2	4:00 PM	Fri	2,514	9.56%	26,305
830	2/13	3:00 PM	Thu	5,388	9.90%	54,411	834	6/28	12:00 PM	Sun	1,746	11.46%	15,230
831	10/8	3:00 PM	Thu	5,528	9.46%	58,466	836	8/14	1:00 PM	Fri	2,499	9.94%	25,152
832	1/22	7:00 AM	Wed	2,270	13.17%	17,230	837	8/14	3:00 PM	Fri	2,136	9.84%	21,699
833	2/14	3:00 PM	Fri	7,192	12.27%	58,598	838	1/6	4:00 PM	Mon	2,346	12.13%	19,334
840	2/19	5:00 PM	Wed	5,004	13.05%	38,333	839	9/18	3:00 PM	Fri	2,617	11.33%	23,093
841	3/11	4:00 PM	Wed	6,130	10.29%	59,581	842	9/18	4:00 PM	Fri	1,447	10.67%	13,561
845	1/10	4:00 PM	Fri	3,396	11.39%	29,805	843	3/6	3:00 PM	Fri	2,058	10.25%	20,081

2020 30th Highest Hour by Traffic Pattern Group													
TPG 3: Urban Principal Arterial							TPG 4: Rural Principal Arterial						
Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT	Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT
8	1/27	7:00 AM	Mon	2,175	14.56%	14,940	4	7/25	12:00 PM	Sat	304	13.21%	2,301
203	3/5	4:00 PM	Thu	1,983	11.59%	17,107	19	2/25	4:00 PM	Tue	560	11.98%	4,675
206	1/28	4:00 PM	Tue	3,329	16.74%	19,888	24	11/20	3:00 PM	Fri	1,836	10.53%	17,437
301	1/14	4:00 PM	Tue	1,323	11.81%	11,200	323	6/26	3:00 PM	Fri	438	11.17%	3,920
304	8/21	3:00 PM	Fri	2,629	10.46%	25,126	360	8/7	3:00 PM	Fri	285	11.42%	2,496
326	10/6	3:00 PM	Tue	877	11.94%	7,348	363	7/17	2:00 PM	Fri	465	11.56%	4,024
330	3/5	4:00 PM	Thu	1,009	11.87%	8,504	378	3/9	3:00 PM	Mon	748	10.88%	6,877
334	3/10	4:00 PM	Tue	1,309	9.35%	13,998	808	10/9	3:00 PM	Fri	1,285	10.76%	11,945
349	2/5	4:00 PM	Wed	3,002	9.57%	31,363	809	10/3	11:00 AM	Sat	748	11.71%	6,385
375	12/11	3:00 PM	Fri	2,142	9.35%	22,903	821	10/16	3:00 PM	Fri	1,027	11.84%	8,677
396	12/18	2:00 PM	Fri	1,109	10.81%	10,258	851	12/11	3:00 PM	Fri	6,418	10.03%	63,960
803	9/25	4:00 PM	Fri	2,035	11.21%	18,148	985	9/23	4:00 PM	Wed	1,932	11.88%	16,269
806	10/16	4:00 PM	Fri	2,676	10.48%	25,537							
810	2/5	7:00 AM	Wed	3,410	12.05%	28,306							
811	2/4	4:00 PM	Tue	4,999	11.86%	42,164							
812	2/12	4:00 PM	Wed	4,107	11.08%	37,069							
813	1/9	3:00 PM	Thu	7,583	9.70%	78,163							
824	1/15	4:00 PM	Wed	3,606	12.05%	29,937							
826	2/5	7:00 AM	Wed	4,589	10.85%	42,297							
827	10/9	5:00 PM	Fri	1,941	10.56%	18,379							
848	8/21	4:00 PM	Fri	1,918	10.01%	19,168							

2020 30th Highest Hour by TPG (Continued)

2020 30th Highest Hour by Traffic Pattern Group													
TPG 5: Urban Minor Arterial/Collector							TPG 6: North Rural Minor Arterial						
Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT	Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT
18	9/22	4:00 PM	Tue	629	11.93%	5,271	2	11/6	4:00 PM	Fri	231	12.31%	1,876
20	10/1	4:00 PM	Thu	669	10.63%	6,294	3	10/10	6:00 PM	Sat	656	13.49%	4,864
380	9/16	3:00 PM	Wed	766	11.36%	6,742	27	7/5	2:00 PM	Sun	403	16.19%	2,489
381	6/14	2:00 PM	Sun	44	13.13%	335	48	1/16	4:00 PM	Thu	500	10.88%	4,596
390	9/29	4:00 PM	Tue	731	10.53%	6,939	51	3/12	3:00 PM	Thu	314	11.62%	2,702
506	12/22	12:00 PM	Tue	1,576	10.66%	14,783	324	2/12	4:00 PM	Wed	481	12.10%	3,974
815	2/27	4:00 PM	Thu	385	11.64%	3,308	328	3/6	4:00 PM	Fri	512	11.41%	4,488
846	10/1	3:00 PM	Thu	532	13.90%	3,827	410	2/20	4:00 PM	Thu	438	11.34%	3,861

2020 30th Highest Hour by Traffic Pattern Group													
TPG 7: Central Rural Minor Arterial							TPG 8: North Rural Collector						
Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT	Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT
1	6/19	5:00 PM	Fri	476	13.02%	3,655	5	9/11	4:00 PM	Fri	208	12.98%	1,602
15	11/3	2:00 PM	Tue	516	11.18%	4,616	29	8/16	1:00 PM	Sun	135	10.94%	1,234
40	1/17	4:00 PM	Fri	405	10.23%	3,958	383	9/9	3:00 PM	Wed	360	11.24%	3,202
367	8/7	4:00 PM	Fri	588	10.78%	5,457	384	6/10	3:00 PM	Wed	65	14.13%	460
391	9/19	12:00 PM	Sat	838	11.65%	7,196	385	7/3	11:00 AM	Fri	200	12.19%	1,641
850	9/11	3:00 PM	Fri	1,402	10.60%	13,232	802	8/11	4:00 PM	Tue	753	15.34%	4,910
853	4/19	1:00 PM	Sun	531	14.00%	3,792	817	8/17	3:00 PM	Mon	201	12.75%	1,577

2020 30th Highest Hour by Traffic Pattern Group													
TPG 9: Central Rural Collector							TPG 10: Special Recreational						
Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT	Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT
362	3/5	4:00 PM	Thu	601	10.79%	5,572	306	6/13	1:00 PM	Sat	777	14.20%	5,473
364	10/14	5:00 PM	Wed	482	11.18%	4,310	805	7/5	12:00 PM	Sun	613	22.22%	2,759
379	10/13	3:00 PM	Tue	145	11.60%	1,250	849	9/5	12:00 PM	Sat	234	14.06%	1,664
382	7/15	4:00 PM	Wed	182	12.80%	1,422	855	9/6	11:00 AM	Sun	368	19.28%	1,909
386	8/20	4:00 PM	Thu	265	12.17%	2,178	856	7/12	1:00 PM	Sun	184	18.76%	981
387	10/21	3:00 PM	Wed	72	14.29%	504							
388	1/15	4:00 PM	Wed	288	12.26%	2,350							
389	10/15	3:00 PM	Thu	202	11.80%	1,712							
816	12/15	4:00 PM	Tue	416	14.59%	2,852							
854	5/30	1:00 PM	Sat	938	11.48%	8,170							

2020 50th Highest Hour by Traffic Pattern Group (TPG)

2020 50th Highest Hour by Traffic Pattern Group													
TPG 1: Urban Interstate							TPG 2: Rural Interstate						
Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT	Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT
205	2/28	5:00 PM	Fri	5,061	10.39%	48,723	106	2/28	2:00 PM	Fri	3,192	8.91%	35,827
208	2/10	5:00 PM	Mon	7,540	9.90%	76,171	126	8/9	3:00 PM	Sun	2,233	9.65%	23,132
216	11/29	2:00 PM	Sun	2,520	11.82%	21,317	371	8/16	12:00 PM	Sun	1,989	13.17%	15,103
317	3/5	4:00 PM	Thu	1,332	11.23%	11,856	393	10/2	3:00 PM	Fri	2,605	9.07%	28,708
370	2/25	4:00 PM	Tue	2,649	10.21%	25,949	502	7/26	1:00 PM	Sun	2,515	10.16%	24,760
372	7/24	3:00 PM	Fri	2,610	9.66%	27,006	600	1/2	2:00 PM	Thu	3,373	9.42%	35,814
374	9/5	12:00 PM	Sat	3,483	12.66%	27,513	705	10/25	3:00 PM	Sun	5,145	8.79%	58,501
377	1/29	5:00 PM	Wed	5,488	11.96%	45,871	706	11/29	2:00 PM	Sun	2,119	10.27%	20,638
394	1/23	5:00 PM	Thu	5,569	9.95%	55,957	709	8/13	3:00 PM	Thu	2,751	9.94%	27,683
701	9/4	1:00 PM	Fri	4,879	8.96%	54,458	712	3/13	5:00 PM	Fri	3,865	9.12%	42,383
702	7/31	2:00 PM	Fri	4,683	9.03%	51,887	800	2/6	7:00 AM	Thu	2,479	12.59%	19,684
801	1/29	4:00 PM	Wed	6,874	9.85%	69,787	807	2/21	5:00 PM	Fri	2,506	10.56%	23,741
804	10/30	4:00 PM	Fri	4,001	9.38%	42,655	825	2/13	5:00 PM	Thu	3,402	9.46%	35,944
818	8/15	1:00 PM	Sat	2,711	10.26%	26,420	828	9/7	1:00 PM	Mon	1,885	12.48%	15,099
823	1/30	4:00 PM	Thu	4,315	9.67%	44,618	829	8/9	12:00 PM	Sun	2,451	9.32%	26,305
830	1/31	3:00 PM	Fri	5,282	9.71%	54,411	834	9/4	1:00 PM	Fri	1,675	11.00%	15,230
831	2/7	3:00 PM	Fri	5,431	9.29%	58,466	836	7/3	1:00 PM	Fri	2,435	9.68%	25,152
832	1/28	5:00 PM	Tue	2,226	12.92%	17,230	837	10/2	4:00 PM	Fri	2,073	9.55%	21,699
833	1/29	7:00 AM	Wed	6,787	11.58%	58,598	838	1/14	5:00 PM	Tue	2,292	11.85%	19,334
840	1/30	5:00 PM	Thu	4,903	12.79%	38,333	839	9/7	2:00 PM	Mon	2,533	10.97%	23,093
841	2/7	3:00 PM	Fri	5,947	9.98%	59,581	842	9/7	12:00 PM	Mon	1,407	10.38%	13,561
845	1/3	4:00 PM	Fri	3,257	10.93%	29,805	843	8/2	2:00 PM	Sun	1,957	9.75%	20,081

2020 50th Highest Hour by Traffic Pattern Group													
TPG 3: Urban Principal Arterial							TPG 4: Rural Principal Arterial						
Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT	Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT
8	2/24	8:00 AM	Mon	2,120	14.19%	14,940	4	9/7	12:00 PM	Mon	291	12.65%	2,301
203	1/21	4:00 PM	Tue	1,912	11.18%	17,107	19	3/5	3:00 PM	Thu	545	11.66%	4,675
206	2/5	4:00 PM	Wed	3,245	16.32%	19,888	24	10/30	4:00 PM	Fri	1,765	10.12%	17,437
301	2/13	4:00 PM	Thu	1,300	11.61%	11,200	323	10/23	2:00 PM	Fri	423	10.79%	3,920
304	1/24	3:00 PM	Fri	2,571	10.23%	25,126	360	1/15	4:00 PM	Wed	278	11.14%	2,496
326	2/3	4:00 PM	Mon	859	11.69%	7,348	363	8/14	2:00 PM	Fri	447	11.11%	4,024
330	10/2	5:00 PM	Fri	985	11.58%	8,504	378	9/25	4:00 PM	Fri	735	10.69%	6,877
334	3/5	3:00 PM	Thu	1,287	9.19%	13,998	808	8/14	4:00 PM	Fri	1,245	10.42%	11,945
349	1/22	5:00 PM	Wed	2,964	9.45%	31,363	809	8/28	4:00 PM	Fri	728	11.40%	6,385
375	9/18	5:00 PM	Fri	2,109	9.21%	22,903	821	8/16	3:00 PM	Sun	980	11.29%	8,677
396	10/9	12:00 PM	Fri	1,090	10.63%	10,258	851	1/17	4:00 PM	Fri	6,323	9.89%	63,960
803	3/1	3:00 PM	Sun	1,995	10.99%	18,148	985	3/11	4:00 PM	Wed	1,910	11.74%	16,269
806	1/23	5:00 PM	Thu	2,623	10.27%	25,537							
810	2/6	4:00 PM	Thu	3,380	11.94%	28,306							
811	1/29	7:00 AM	Wed	4,829	11.45%	42,164							
812	2/21	4:00 PM	Fri	4,041	10.90%	37,069							
813	1/17	7:00 AM	Fri	7,449	9.53%	78,163							
824	1/2	5:00 PM	Thu	3,521	11.76%	29,937							
826	2/21	4:00 PM	Fri	4,527	10.70%	42,297							
827	9/18	3:00 PM	Fri	1,891	10.29%	18,379							
848	7/3	2:00 PM	Fri	1,866	9.73%	19,168							

2020 50th Highest Hour by TPG (Continued)

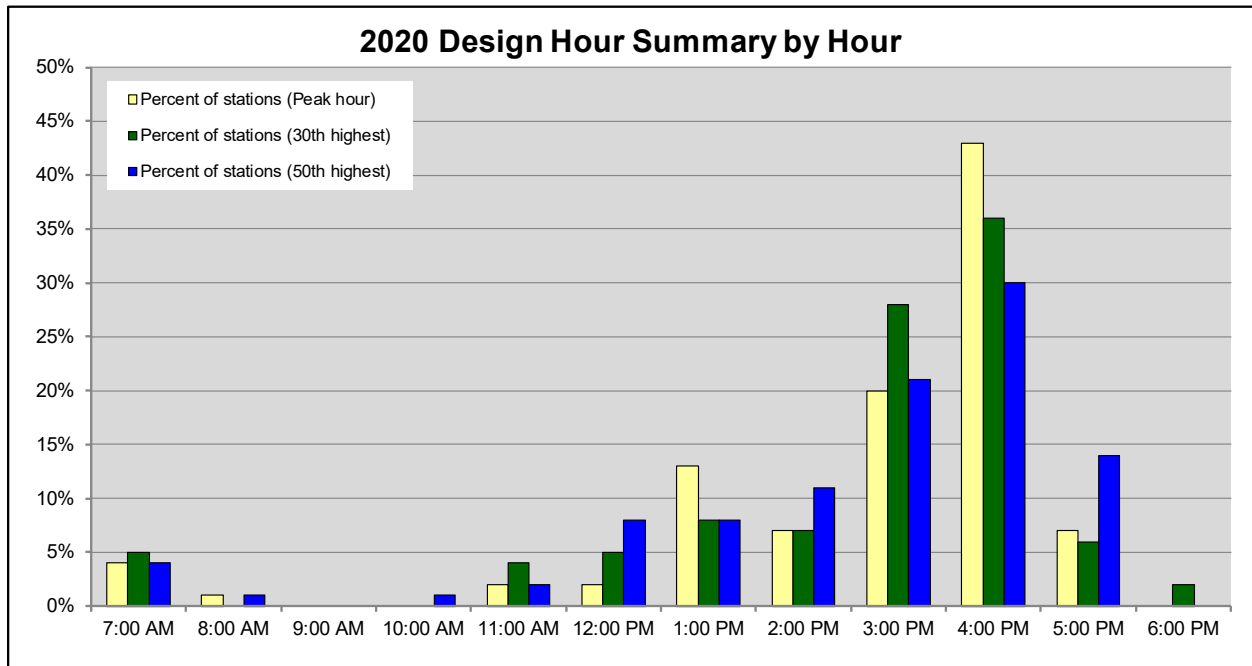
2020 50th Highest Hour by Traffic Pattern Group													
TPG 5: Urban Minor Arterial/Collector							TPG 6: North Rural Minor Arterial						
Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT	Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT
18	10/12	4:00 PM	Mon	619	11.74%	5,271	2	7/17	3:00 PM	Fri	222	11.83%	1,876
20	6/16	5:00 PM	Tue	654	10.39%	6,294	3	10/4	2:00 PM	Sun	623	12.81%	4,864
380	9/21	5:00 PM	Mon	749	11.11%	6,742	27	7/3	2:00 PM	Fri	371	14.91%	2,489
381	4/28	3:00 PM	Tue	42	12.54%	335	48	9/30	4:00 PM	Wed	489	10.64%	4,596
390	2/24	4:00 PM	Mon	716	10.32%	6,939	51	9/4	3:00 PM	Fri	308	11.40%	2,702
506	10/9	3:00 PM	Fri	1,547	10.46%	14,783	324	11/24	3:00 PM	Tue	475	11.95%	3,974
815	12/15	3:00 PM	Tue	376	11.37%	3,308	328	1/22	7:00 AM	Wed	503	11.21%	4,488
846	9/24	12:00 PM	Thu	508	13.27%	3,827	410	11/20	3:00 PM	Fri	426	11.03%	3,861

2020 50th Highest Hour by Traffic Pattern Group													
TPG 7: Central Rural Minor Arterial							TPG 8: North Rural Collector						
Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT	Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT
1	7/12	1:00 PM	Sun	457	12.50%	3,655	5	8/19	4:00 PM	Wed	202	12.61%	1,602
15	9/29	3:00 PM	Tue	501	10.85%	4,616	29	7/3	12:00 PM	Fri	130	10.53%	1,234
40	1/22	3:00 PM	Wed	399	10.08%	3,958	383	10/16	3:00 PM	Fri	351	10.96%	3,202
367	11/6	3:00 PM	Fri	578	10.59%	5,457	384	8/1	12:00 PM	Sat	63	13.70%	460
391	10/10	11:00 AM	Sat	819	11.38%	7,196	385	2/21	4:00 PM	Fri	194	11.82%	1,641
850	2/26	4:00 PM	Wed	1,380	10.43%	13,232	802	7/7	4:00 PM	Tue	720	14.66%	4,910
853	8/15	1:00 PM	Sat	505	13.32%	3,792	817	10/1	3:00 PM	Thu	195	12.37%	1,577

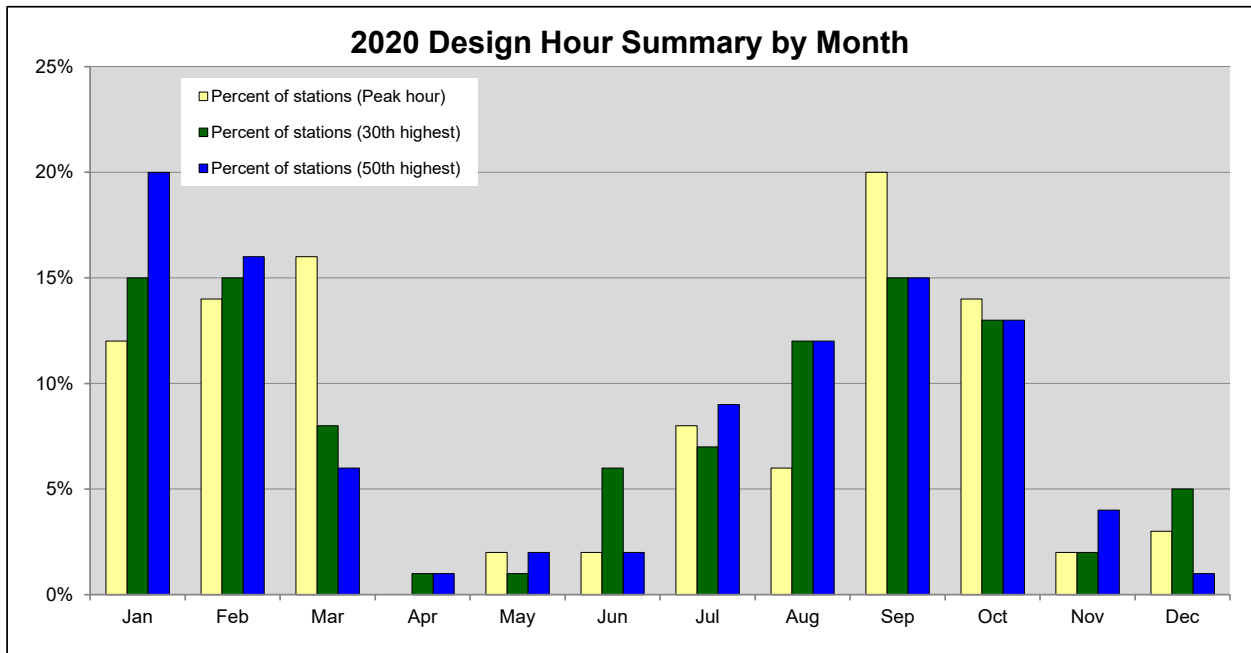
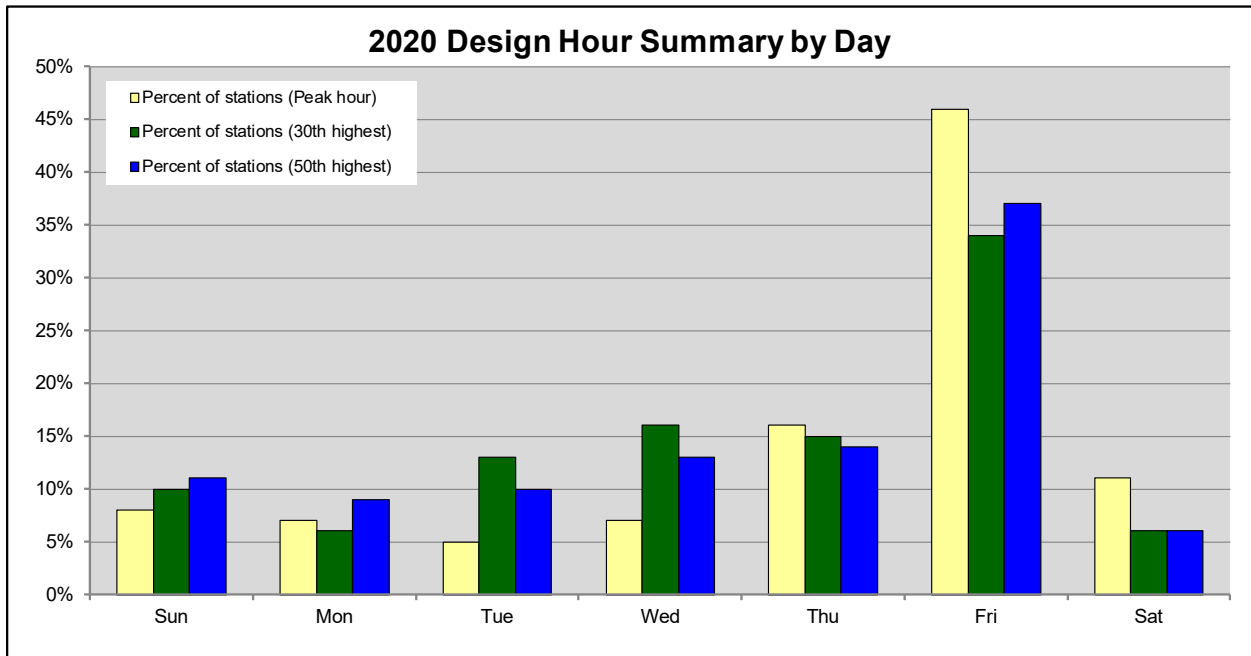
2020 50th Highest Hour by Traffic Pattern Group													
TPG 9: Central Rural Collector							TPG 10: Special Recreational						
Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT	Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT
362	2/11	4:00 PM	Tue	590	10.59%	5,572	306	9/19	12:00 PM	Sat	736	13.45%	5,473
364	3/11	4:00 PM	Wed	472	10.95%	4,310	805	6/6	11:00 AM	Sat	568	20.59%	2,759
379	10/21	4:00 PM	Wed	142	11.36%	1,250	849	5/25	1:00 PM	Mon	227	13.54%	1,664
382	1/15	4:00 PM	Wed	173	12.17%	1,422	855	7/19	10:00 AM	Sun	354	18.54%	1,909
386	8/14	2:00 PM	Fri	256	11.75%	2,178	856	9/6	4:00 PM	Sun	174	17.74%	981
387	5/29	1:00 PM	Fri	69	13.69%	504							
388	8/28	4:00 PM	Fri	280	11.91%	2,350							
389	1/31	4:00 PM	Fri	194	11.33%	1,712							
816	9/22	4:00 PM	Tue	388	13.60%	2,852							
854	10/15	4:00 PM	Thu	922	11.29%	8,170							

2020 Design Hour Summaries: Peak, 30th and 50th Highest Hour

Design Hour Volume (DHV) is the hourly traffic volume used in the design of highways. The DHV is usually represented by the 30th highest hourly volume of the future year chosen for design. The following three graphs show the peak, 30th and 50th highest hour summary by hour, day, and month.



2020 Design Hour Summaries: Peak, 30th and 50th Highest Hour



Five Year Summary of Annual Average Daily Traffic (AADT) from Permanent Sites

This chart shows the permanent site station numbers and their Annual Average Daily Traffic (AADT) for the past five years, 2016 through 2020. The percent change is also given for 2019 to 2020 and 2016 to 2020, showing where traffic has increased or decreased. **Please keep in mind that the 2020 data was impacted by the COVID-19 pandemic.**

**Indicates there is no data available.*

Site #	Annual Average Daily Traffic (AADT)					Percent Change	
	2016	2017	2018	2019	2020	2019-2020	2016-2020
1	3,552	3,688	3,698	3,799	3,655	-3.8%	2.9%
2	2,138	1,947	1,911	1,916	1,871	-2.3%	-12.5%
3	5,317	5,208	5,191	5,226	4,864	-6.9%	-8.5%
4	2,654	2,687	2,665	2,736	2,301	-15.9%	-13.3%
5	1,595	1,745	1,764	1,737	1,602	-7.8%	0.4%
6	**	**	**	**	**	N/A	N/A
7	**	**	**	**	**	N/A	N/A
8	18,150	18,738	19,672	20,849	14,940	-28.3%	-17.7%
9	**	**	**	**	**	N/A	N/A
10	**	**	**	**	**	N/A	N/A
11	**	**	**	**	**	N/A	N/A
15	5,142	5,276	5,394	5,429	4,616	-15.0%	-10.2%
18	6,291	6,502	6,172	5,760	5,271	-8.5%	-16.2%
19	5,824	5,698	5,656	5,770	4,675	-19.0%	-19.7%
20	7,287	7,083	**	7,166	6,294	-12.2%	-13.6%
24	20,391	21,289	21,787	21,779	17,440	-19.9%	-14.5%
27	2,749	2,766	2,801	2,778	2,489	-10.4%	-9.5%
29	1,112	1,055	**	1,275	1,234	-3.2%	11.0%
40	4,387	4,402	4,199	4,304	3,958	-8.0%	-9.8%
48	**	5,358	5,364	5,581	4,596	-17.6%	-14.2%
51	3,121	3,203	3,115	3,025	2,702	-10.7%	-13.4%
106	43,827	**	44,255	46,436	35,828	-22.8%	-18.3%
126	25,554	24,029	25,662	24,731	23,132	-6.5%	-9.5%
158	23,969	24,629	23,233	**	**	N/A	-3.1%
203	20,674	**	20,299	21,290	17,107	-19.6%	-17.3%
205	**	**	57,157	58,874	48,723	-17.2%	-14.8%
206	26,370	26,530	26,892	27,534	19,888	-27.8%	-24.6%
207	21,830	22,301	**	**	**	N/A	2.2%
208	94,118	95,526	94,814	96,610	76,180	-21.1%	-19.1%
216	**	**	26,940	26,777	21,317	-20.4%	-20.9%
301	13,364	13,247	13,068	13,168	11,200	-14.9%	-16.2%
304	29,482	29,760	29,192	29,300	25,126	-14.2%	-14.8%
306	5,728	5,779	5,850	5,830	5,473	-6.1%	-4.5%
317	12,908	**	14,301	14,685	11,856	-19.3%	-8.1%
323	4,503	4,651	4,692	4,728	3,920	-17.1%	-12.9%
324	4,275	4,403	4,429	4,422	3,974	-10.1%	-7.0%

Five Year Summary of AADT from Permanent Sites (Continued)

*Indicates there is no data available.

Site #	Annual Average Daily Traffic (AADT)					Percent Change	
	2016	2017	2018	2019	2020	2019-2020	2016-2020
326	8,659	8,594	8,567	8,334	7,348	-11.8%	-15.1%
328	4,865	4,874	4,937	4,974	4,488	-9.8%	-7.7%
330	10,913	10,824	10,973	11,012	8,504	-22.8%	-22.1%
334	16,839	16,566	16,348	16,247	13,998	-13.8%	-16.9%
349	38,638	37,924	38,071	37,646	31,363	-16.7%	-18.8%
360	2,670	2,713	2,691	2,721	2,496	-8.3%	-6.5%
362	6,222	6,108	6,041	6,355	5,572	-12.3%	-10.4%
363	5,018	5,070	5,114	5,058	4,024	-20.4%	-19.8%
364	**	**	4,949	4,912	4,310	-12.3%	-12.9%
367	6,179	6,206	6,093	6,059	5,457	-9.9%	-11.7%
370	29,848	30,781	31,294	31,856	25,949	-18.5%	-13.1%
371	18,733	18,968	19,558	17,618	15,103	-14.3%	-19.4%
372	28,350	28,809	31,735	32,643	27,006	-17.3%	-4.7%
374	**	**	**	**	27,523	0.0%	0.0%
375	**	25,133	26,285	27,101	22,903	-15.5%	-8.9%
376	60,176	61,228	62,938	61,955	**	0.0%	3.0%
377	61,638	62,354	63,041	60,341	45,871	-24.0%	-25.6%
378	7,317	7,593	7,661	7,849	6,877	-12.4%	-6.0%
379	1,353	1,317	1,394	1,339	1,250	-6.6%	-5.1%
380	**	**	**	**	6,742	0.0%	0.0%
381	423	421	374	374	335	-10.4%	-20.8%
382	1,742	1,770	1,702	1,688	1,432	-15.2%	-17.8%
383	3,665	3,474	3,493	3,306	3,202	-3.1%	-12.6%
384	384	401	418	429	460	7.2%	19.8%
385	1,783	1,782	1,715	1,698	1,641	-3.4%	-7.9%
386	2,182	2,260	2,253	2,243	2,178	-2.9%	-0.2%
387	3,396	3,416	2,967	542	504	-7.0%	-85.2%
388	**	2,794	2,650	2,721	2,350	-13.6%	-15.9%
389	1,914	1,896	1,830	1,824	1,712	-6.1%	-10.6%
390	6,245	6,366	7,217	7,840	6,939	-11.5%	11.1%
391	8,325	8,506	8,323	8,131	7,196	-11.5%	-13.6%
392	24,880	**	**	**	**	N/A	0.0%
393	34,337	36,633	35,219	**	28,708	0.0%	-16.4%
394	66,323	69,335	67,759	68,947	55,957	-18.8%	-15.6%
395	9,114	9,575	10,088	10,522	**	0.0%	15.4%
396	12,874	12,344	12,248	12,017	10,258	-14.6%	-20.3%
410	**	4,580	**	**	3,862	0.0%	-15.7%
501	10,203	10,675	10,853	**	**	N/A	6.4%
502	26,860	28,361	26,422	27,817	24,764	-11.0%	-7.8%
503	**	**	**	**	**	N/A	N/A

Five Year Summary of AADT from Permanent Sites (Continued)

*Indicates there is no data available.

Site #	Annual Average Daily Traffic (AADT)					Percent Change	
	2016	2017	2018	2019	2020	2019-2020	2016-2020
504	**	**	**	**	**	N/A	N/A
505	22,623	23,042	**	**	**	N/A	1.9%
506	15,767	16,551	16,433	16,071	14,783	-8.0%	-6.2%
600	39,840	44,041	42,309	42,091	35,814	-14.9%	-10.1%
700	12,471	**	**	12,557	**	0.0%	0.7%
701	*	66,339	63,224	**	54,467	0.0%	-17.9%
702	*	*	59,423	**	51,887	0.0%	-12.7%
703	*	37,949	38,029	**	**	N/A	0.2%
704	*	22,056	21,958	21,844	**	0.0%	-1.0%
705	*	*	70,315	74,850	58,501	-21.8%	-16.8%
706	*	*	*	27,142	20,638	-24.0%	-24.0%
709	*	*	*	33,112	27,697	-16.4%	0.0%
710	*	*	50,166	50,833	**	0.0%	1.3%
712	*	*	*	49,661	42,383	-14.7%	-14.7%
800	22,119	23,910	23,678	24,500	19,685	-19.7%	-11.0%
801	77,240	**	**	82,240	69,787	-15.1%	-9.6%
802	4,252	4,489	4,648	5,157	4,910	-4.8%	15.5%
803	21,756	22,533	23,265	23,726	18,148	-23.5%	-19.5%
804	48,135	51,941	53,699	52,336	42,655	-18.5%	-11.4%
805	2,827	2,912	2,937	2,865	2,761	-3.6%	-2.3%
806	29,299	29,348	28,968	30,394	25,537	-16.0%	-12.8%
807	30,167	29,738	31,677	30,559	23,741	-22.3%	-21.3%
808	14,028	13,735	14,531	**	11,945	0.0%	-14.8%
809	**	**	8,282	7,783	6,385	-18.0%	-18.0%
810	36,587	35,845	35,930	35,695	28,306	-20.7%	-22.6%
811	47,418	46,748	48,462	50,556	42,172	-16.6%	-11.1%
812	47,800	45,426	46,721	46,453	37,069	-20.2%	-22.4%
813	90,265	93,568	90,593	91,164	78,163	-14.3%	-13.4%
815	*	3,904	3,895	3,830	3,308	-13.6%	-15.1%
816	*	3,375	3,343	3,388	2,852	-15.8%	-14.7%
817	*	*	1,649	1,730	1,577	-8.8%	-4.4%
818	25,654	29,005	30,683	30,527	26,420	-13.5%	-8.9%
821	11,222	10,094	10,610	11,050	8,677	-21.5%	-14.0%
822	**	**	**	**	**	N/A	N/A
823	55,584	56,041	53,523	55,002	44,618	-18.9%	-19.7%
824	40,182	38,996	38,472	39,092	29,937	-23.4%	-23.2%
825	44,965	46,479	46,494	46,301	35,944	-22.4%	-22.7%
826	49,585	48,205	50,878	49,469	42,297	-14.5%	-12.3%
827	20,151	20,751	23,067	23,758	18,379	-22.6%	-11.4%
828	*	18,932	20,023	20,319	15,099	-25.7%	-20.2%

Five Year Summary of AADT from Permanent Sites (Continued)

*Indicates there is no data available.

Site #	Annual Average Daily Traffic (AADT)					Percent Change	
	2016	2017	2018	2019	2020	2019-2020	2016-2020
829	*	28,236	29,181	29,318	26,305	-10.3%	-6.8%
830	60,968	64,563	64,713	63,401	54,411	-14.2%	-15.7%
831	64,652	65,693	66,088	64,932	58,628	-9.7%	-10.8%
832	*	20,108	21,004	21,822	17,230	-21.0%	-14.3%
833	*	70,787	73,044	67,245	58,598	-12.9%	-17.2%
834	*	*	21,140	20,998	15,230	-27.5%	-28.0%
835	*	*	9,527	**	**	N/A	0.0%
836	*	*	*	28,622	25,152	-12.1%	-12.1%
837	*	*	26,576	**	21,699	0.0%	-18.4%
838	**	**	**	**	19,334	0.0%	0.0%
839	*	*	26,875	27,239	23,093	-15.2%	-14.1%
840	*	*	51,884	52,715	38,346	-27.3%	-26.1%
841	**	**	**	**	59,581	0.0%	0.0%
842	*	*	*	15,241	13,561	-11.0%	-11.0%
843	*	*	*	22,860	20,081	-12.2%	-12.2%
844	**	**	**	**	**	N/A	N/A
845	*	*	*	34,785	29,805	-14.3%	-14.3%
846	*	*	*	5,197	3,827	-26.4%	-26.4%
848	*	*	*	*	19,168	0.0%	0.0%
849	*	*	*	*	1,665	0.0%	0.0%
850	*	*	*	*	13,232	0.0%	0.0%
851	*	*	*	*	63,960	0.0%	0.0%
853	*	*	*	*	3,792	0.0%	0.0%
854	*	*	*	*	8,170	0.0%	0.0%
855	*	*	*	*	1,909	0.0%	0.0%
856	*	*	*	*	981	0.0%	0.0%
985	18,416	18,308	18,723	18,124	16,269	-10.2%	-11.7%

* 701, 703, 704, 815, 816, 828, 829, 832, & 833 2017 was first full year of data.

* 702, 705, 707, 710, 817, 834, 835, 837, 839, & 840 2018 was first full year of data.

* 706, 709, 712, 836, 842, 843, 845, & 846 2019 was first full year of data.

* 848, 849, 850, 851, 853, 854, 855, & 856 2020 was first full year of data

** Site inactive or full year of data unavailable.

Statewide Traffic Trends: Annual and Multi-Year Change By Traffic Pattern Group

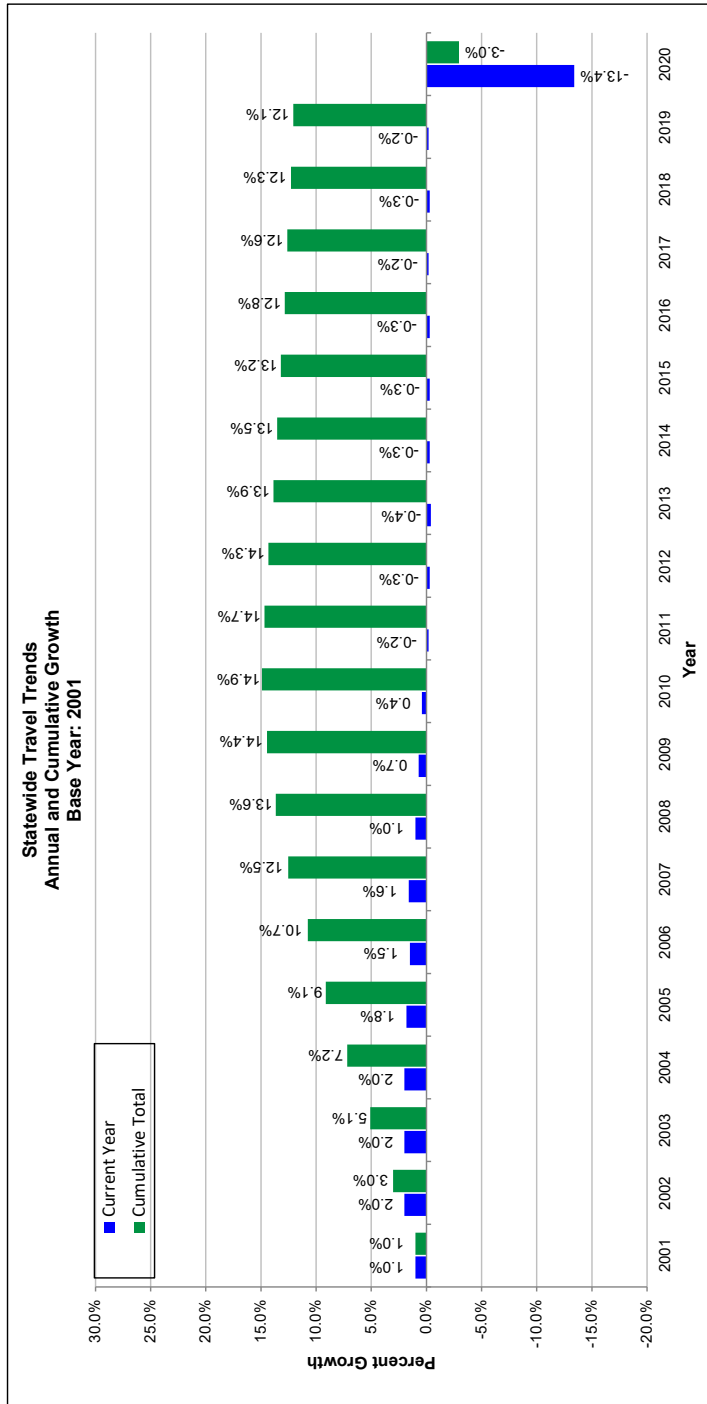
This table shows percent change for the traffic pattern groups at one-year intervals starting with 2015/2016 up to 2019/2020. An overall change in growth over the 5 year period for the traffic pattern groups is also shown on this table.

Percent Change Per Year, 2015 - 2020						
TRAFFIC PATTERN GROUPS	2015-16	2016-17	2017-18	2018-19	2019-20	2015-20
TPG 1 Urban Interstate	0.8%	0.9%	1.1%	0.8%	-19.0%	-15.4%
TPG 2 Rural Interstate	1.0%	1.1%	1.1%	1.2%	-18.0%	-13.6%
TPG 3 Urban Principal Arterial	-0.7%	-0.7%	-0.8%	-0.7%	-18.7%	-21.6%
TPG 4 Rural Principal Arterial	-0.5%	-0.5%	-0.6%	-0.5%	-15.8%	-17.9%
TPG 5 Urban Minor Arterials or Collectors	-0.7%	-0.7%	-0.8%	-0.7%	-17.2%	-20.1%
TPG 6 North Rural Minor Arterials	-0.5%	-0.5%	-0.6%	-0.5%	-11.8%	-13.9%
TPG 7 Central Rural Minor Arterials	-0.5%	-0.5%	-0.6%	-0.5%	-10.6%	-12.7%
TPG 8 North Rural Collectors	-0.5%	-0.5%	-0.6%	-0.5%	-5.8%	-7.9%
TPG 9 Central Rural Collectors	-0.5%	-0.5%	-0.6%	-0.5%	-11.5%	-13.6%
TPG 10 Special Recreational	-0.5%	-0.5%	-0.6%	-0.5%	-6.0%	-8.1%
Statewide	-0.3%	-0.2%	-0.3%	-0.2%	-13.4%	-14.5%

Please keep in mind that the 2020 data was impacted by the COVID-19 pandemic. Values shown in columns 2019-20 and 2015-20, represent an update published 9/2021.

Statewide Traffic Trends

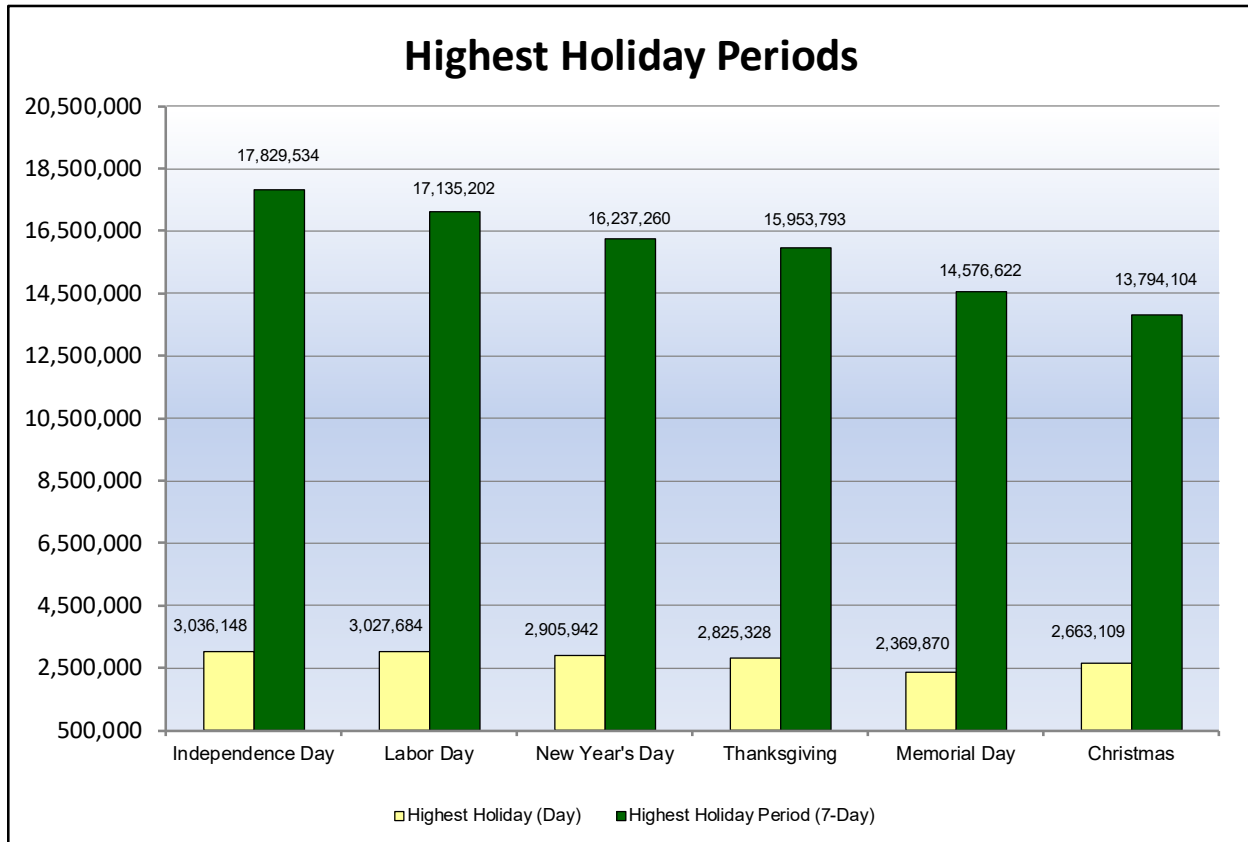
This chart shows yearly changes from 2001 to 2020 and a 20-year cumulative trend for the same period.



Please keep in mind that the 2020 data was impacted by the COVID-19 pandemic. Values shown for 2020, represent an update published 9/2021.

Heaviest Holiday Travel Periods: 2020

The 122 permanent sites, which are the total number of sites with a minimum of six months of data, were used to calculate the holidays having the highest seven-day periods of traffic. The highest seven-day holiday periods and the highest day within the seven-day holiday period (total traffic at all permanent site stations) are shown on the chart below:



The chart indicates that Independence Day had the highest seven-day holiday period in 2020 with a total volume of 17,829,534. Labor Day ranked second (17,135,202) followed by New Year's Day (16,237,260) and Thanksgiving (15,953,793). Memorial Day and Christmas Day ranked fifth (14,576,622) and sixth (13,794,104) respectively.

The highest day during a seven-day holiday period in 2020 was the Thursday before Independence Day (July 2, 2020), which had a volume of 3,036,148. The second highest day was the Friday before Labor Day (September 4, 2020), which had a volume of 3,027,684. The Friday before New Year's Day (December 27, 2019), ranked third with 2,905,942, while the Friday before Thanksgiving Day (November 20, 2020), ranked fourth with 2,825,328. The Wednesday before Christmas (December 23, 2020) ranked fifth with 2,663,109, while the Friday after Memorial Day (May 29, 2020) ranked sixth with 2,369,870.

Heaviest Holiday Travel Period Comparisons: 2019-2020

Highest Holiday (Day)			
2019		2020	
Holiday	Total Volume	Holiday	Total Volume
1. Memorial Day	3,195,600	1. Independence Day	3,036,148
2. Independence Day	3,082,292	2. Labor Day	3,027,684
3. Thanksgiving	3,022,811	3. New Year's Day	2,905,942
4. Labor Day	2,870,354	4. Thanksgiving	2,825,328
5. Christmas	2,802,526	5. Christmas	2,663,109
6. New Year's Day	2,520,071	6. Memorial Day	2,369,870

Highest Holiday Period (7-Day)			
2019		2020	
Holiday	Total Volume	Holiday	Total Volume
1. Independence Day	18,220,930	1. Independence Day	17,829,534
2. Memorial Day	17,935,960	2. Labor Day	17,135,202
3. Thanksgiving	16,587,732	3. New Year's Day	16,237,260
4. Christmas	16,551,790	4. Thanksgiving	15,953,793
5. Labor Day	16,439,118	5. Memorial Day	14,576,622
6. New Year's Day	14,674,638	6. Christmas	13,794,104

Factoring Process: Traffic Adjustment Factors

Traffic Adjustment Factors

Traffic Adjustment Factors are numbers that are used to create traffic statistics representing an average day. Factors are generated by applying statistical methods and programs to raw traffic counts. The different procedures used to factor counts depend on the following outcomes:

24-Hour Total Traffic and Truck Traffic Estimation

Count data less than 24-hours (short term counts) must first be expanded to a 24-hour total, which is accomplished through the use of hourly percentage tables. Separate tables are utilized for total vehicles and truck data application.

AADT and ADTT Estimation

A 24-hour count is processed to an Annual Average Daily Traffic (AADT) and Average Daily Truck Traffic (ADTT) through the application of a “day of week by month” factor. Separate tables are utilized for total vehicle and truck data application.

Axle Correction

Axle volume count data is collected by counting the number of axles striking a single pneumatic tube stretched across a section of highway and dividing by two. This type of data must be corrected to compensate for vehicles containing more than two axles (specifically truck data) to obtain a representative number of vehicles actually traveling that road section. This representation is obtained through the application of an axle correction factor.

Equivalent Single Axle Load Adjustment (ESAL)

ESAL adjustment factors are applied to the ADTT for each type of truck classification, to determine the loading effect these truck classes have on the pavement. Two separate calculations are performed: one for rigid type pavement (concrete) and one for flexible type pavement (bituminous). The AASHTO Mechanistic Empirical Pavement Design Guide has incorporated improved methods of determining loading effects of traffic termed axle-load spectra. In the future, these new methods will supersede the use of ESAL factors.

Growth Factor

If the count to be analyzed was taken earlier than the current year, a county growth trend is applied to project the older count data to a representative current year estimate. County growth trends are established based on Functional Class Group (FCG).

Design Hour Volume Factor, DHV (K)

The K-factor represents the percentage of AADT during the design hour. It is calculated by dividing the peak hour volume by the AADT. A 24-hour count is required to calculate the K-factor. If this condition is not met (in the case of manual counts), a default value is applied. The default value is calculated from the 122 permanent site stations using the 30th highest hour and is established based on Traffic Pattern Group (TPG).

Table 350
Hourly Percentages Compiled for Total Vehicles

The following table shows hourly percentages of total vehicles sorted by Traffic Pattern Group (TPG) for the year 2020. Factors from this table are applied to raw traffic counts of less than 24 hours, which may include volume counts (axle and loop), automatic vehicle classification (AVC), or manual classification counts. Hourly percentages from this table are applied to the known hour periods of the raw count, converting it to a 24-hour total.

The factors were developed using the Department's Traffic Data System (TDS) Statistical Analysis tool. Raw count data from 20,000 AVC counts, collected statewide and averaged over the last five years, was assigned to the respective TPG and a summary was produced showing the hourly percentage tables by direction (applied to divided roadways).

Hourly Percentages: Total Vehicles							
TPG 1				TPG 2			
HOUR	DIR 1	DIR 2	TOTAL	HOUR	DIR 1	DIR 2	TOTAL
1	0.95%	1.07%	1.02%	1	1.16%	1.29%	1.39%
2	0.74%	0.78%	0.76%	2	0.96%	1.06%	1.14%
3	0.70%	0.71%	0.71%	3	0.93%	1.01%	1.08%
4	0.86%	0.81%	0.84%	4	1.07%	1.11%	1.19%
5	1.33%	1.21%	1.28%	5	1.57%	1.45%	1.59%
6	2.98%	2.35%	2.70%	6	2.94%	2.40%	2.63%
7	6.08%	4.29%	5.19%	7	5.40%	3.91%	4.27%
8	8.25%	5.64%	6.77%	8	7.08%	5.07%	5.40%
9	7.06%	5.35%	6.10%	9	6.08%	4.97%	5.23%
10	5.61%	4.91%	5.26%	10	5.44%	4.90%	5.19%
11	5.21%	4.89%	5.09%	11	5.53%	5.11%	5.44%
12	5.25%	5.13%	5.26%	12	5.66%	5.30%	5.64%
13	5.39%	5.38%	5.46%	13	5.75%	5.63%	5.80%
14	5.50%	5.62%	5.63%	14	5.88%	5.94%	6.01%
15	5.98%	6.40%	6.21%	15	6.26%	6.60%	6.48%
16	6.61%	7.81%	7.12%	16	6.68%	7.69%	7.05%
17	6.93%	8.76%	7.66%	17	6.83%	8.43%	7.29%
18	6.67%	8.33%	7.34%	18	6.40%	7.79%	6.78%
19	5.11%	5.86%	5.52%	19	4.92%	5.45%	5.24%
20	3.77%	4.28%	4.13%	20	3.81%	4.21%	4.20%
21	3.06%	3.53%	3.38%	21	3.18%	3.57%	3.57%
22	2.54%	2.93%	2.81%	22	2.71%	2.96%	3.03%
23	1.99%	2.26%	2.18%	23	2.13%	2.34%	2.45%
24	1.43%	1.70%	1.58%	24	1.63%	1.81%	1.91%
TOTAL	100.00%	100.00%	100.00%	TOTAL	100.00%	100.00%	100.00%

Table 350
Hourly Percentages Compiled for Total Vehicles (Continued)

Hourly Percentages: Total Vehicles							
TPG 3				TPG 4			
HOUR	DIR 1	DIR 2	TOTAL	HOUR	DIR 1	DIR 2	TOTAL
1	0.64%	0.82%	0.69%	1	0.66%	0.85%	0.68%
2	0.42%	0.50%	0.43%	2	0.50%	0.57%	0.48%
3	0.38%	0.42%	0.37%	3	0.49%	0.52%	0.46%
4	0.50%	0.45%	0.45%	4	0.70%	0.64%	0.61%
5	1.04%	0.76%	0.86%	5	1.42%	1.04%	1.21%
6	2.86%	1.81%	2.25%	6	3.44%	2.25%	2.83%
7	5.99%	3.77%	4.69%	7	6.17%	4.04%	5.05%
8	8.18%	5.43%	6.57%	8	7.68%	5.47%	6.44%
9	7.26%	5.30%	6.18%	9	6.47%	5.05%	5.78%
10	5.77%	4.83%	5.37%	10	5.58%	4.81%	5.35%
11	5.30%	4.82%	5.24%	11	5.53%	4.93%	5.46%
12	5.45%	5.24%	5.56%	12	5.64%	5.25%	5.68%
13	5.70%	5.65%	5.90%	13	5.75%	5.57%	5.90%
14	5.70%	5.78%	5.93%	14	5.90%	5.92%	6.07%
15	6.10%	6.62%	6.47%	15	6.39%	6.78%	6.69%
16	6.71%	8.10%	7.34%	16	7.09%	8.37%	7.67%
17	6.99%	9.02%	7.82%	17	7.23%	9.28%	8.07%
18	6.83%	8.76%	7.64%	18	6.75%	8.50%	7.45%
19	5.41%	6.48%	5.98%	19	4.94%	5.84%	5.37%
20	4.05%	4.80%	4.54%	20	3.64%	4.35%	4.02%
21	3.19%	3.87%	3.64%	21	2.88%	3.60%	3.27%
22	2.49%	3.06%	2.80%	22	2.30%	2.90%	2.53%
23	1.82%	2.16%	1.95%	23	1.70%	1.99%	1.76%
24	1.22%	1.55%	1.33%	24	1.15%	1.48%	1.17%
TOTAL	100.00%	100.00%	100.00%	TOTAL	100.00%	100.00%	100.00%

Table 350
Hourly Percentages Compiled for Total Vehicles (Continued)

Hourly Percentages: Total Vehicles							
TPG 5				TPG 6			
HOUR	DIR 1	DIR 2	TOTAL	HOUR	DIR 1	DIR 2	TOTAL
1	0.61%	0.77%	0.59%	1	0.62%	0.68%	0.56%
2	0.39%	0.47%	0.36%	2	0.38%	0.41%	0.36%
3	0.36%	0.40%	0.31%	3	0.40%	0.39%	0.34%
4	0.46%	0.43%	0.37%	4	0.52%	0.48%	0.45%
5	0.92%	0.70%	0.76%	5	1.04%	1.11%	0.97%
6	2.49%	1.67%	2.05%	6	2.84%	2.34%	2.46%
7	5.40%	3.67%	4.44%	7	5.34%	4.37%	4.70%
8	7.71%	5.39%	6.57%	8	7.07%	5.73%	6.19%
9	6.93%	5.19%	6.10%	9	6.20%	5.86%	5.65%
10	5.56%	4.67%	5.20%	10	5.59%	5.18%	5.46%
11	5.21%	4.64%	5.10%	11	5.58%	5.09%	5.67%
12	5.51%	5.12%	5.54%	12	5.79%	5.43%	5.96%
13	5.89%	5.62%	5.94%	13	6.00%	5.68%	6.24%
14	5.85%	5.64%	5.89%	14	6.07%	5.71%	6.33%
15	6.32%	6.58%	6.51%	15	6.73%	6.85%	6.99%
16	7.09%	8.31%	7.59%	16	7.24%	7.96%	8.02%
17	7.47%	9.57%	8.24%	17	7.60%	8.48%	8.23%
18	7.33%	9.28%	8.12%	18	7.21%	8.08%	7.39%
19	5.64%	6.62%	6.18%	19	5.55%	6.04%	5.47%
20	4.20%	4.84%	4.67%	20	3.99%	4.53%	4.17%
21	3.29%	3.85%	3.74%	21	3.08%	3.58%	3.29%
22	2.48%	2.99%	2.75%	22	2.34%	2.73%	2.39%
23	1.75%	2.08%	1.83%	23	1.76%	1.92%	1.64%
24	1.14%	1.50%	1.15%	24	1.07%	1.37%	1.07%
TOTAL	100.00%	100.00%	100.00%	TOTAL	100.00%	100.00%	100.00%

Table 350
Hourly Percentages Compiled for Total Vehicles (Continued)

Hourly Percentages: Total Vehicles							
TPG 7				TPG 8			
HOUR	DIR 1	DIR 2	TOTAL	HOUR	DIR 1	DIR 2	TOTAL
1	0.74%	0.91%	0.60%	1	0.78%	1.00%	0.64%
2	0.52%	0.58%	0.39%	2	0.53%	0.63%	0.41%
3	0.49%	0.53%	0.37%	3	0.47%	0.52%	0.36%
4	0.68%	0.60%	0.50%	4	0.59%	0.46%	0.44%
5	1.23%	0.94%	1.10%	5	1.03%	0.73%	0.88%
6	3.06%	2.02%	2.85%	6	2.57%	1.59%	2.21%
7	6.11%	3.98%	5.18%	7	5.45%	3.41%	4.52%
8	7.97%	5.38%	6.53%	8	7.49%	5.29%	6.27%
9	6.69%	5.03%	5.68%	9	6.68%	5.19%	5.77%
10	5.54%	4.64%	5.15%	10	5.50%	5.11%	5.22%
11	5.36%	4.80%	5.21%	11	5.29%	5.13%	5.30%
12	5.37%	5.13%	5.45%	12	5.49%	5.38%	5.63%
13	5.57%	5.53%	5.72%	13	5.90%	5.75%	6.02%
14	5.63%	5.70%	5.88%	14	5.81%	5.71%	6.01%
15	6.18%	6.52%	6.59%	15	6.31%	6.52%	6.65%
16	7.05%	8.18%	7.79%	16	6.82%	8.10%	7.80%
17	7.42%	9.12%	8.32%	17	7.04%	8.82%	8.29%
18	6.99%	8.91%	7.90%	18	6.75%	8.60%	7.85%
19	5.33%	6.36%	5.70%	19	5.53%	6.46%	5.89%
20	3.83%	4.60%	4.23%	20	4.33%	4.71%	4.53%
21	2.97%	3.83%	3.44%	21	3.54%	3.81%	3.66%
22	2.33%	3.02%	2.55%	22	2.82%	3.07%	2.67%
23	1.75%	2.17%	1.73%	23	2.02%	2.30%	1.79%
24	1.19%	1.52%	1.14%	24	1.26%	1.71%	1.19%
TOTAL	100.00%	100.00%	100.00%	TOTAL	100.00%	100.00%	100.00%

Table 350
Hourly Percentages Compiled for Total Vehicles (Continued)

Hourly Percentages: Total Vehicles							
TPG 9				TPG 10			
HOUR	DIR 1	DIR 2	TOTAL	HOUR	DIR 1	DIR 2	TOTAL
1	0.71%	0.95%	0.60%	1	0.55%	0.78%	0.50%
2	0.49%	0.62%	0.38%	2	0.30%	0.33%	0.27%
3	0.45%	0.55%	0.34%	3	0.34%	0.28%	0.25%
4	0.54%	0.56%	0.43%	4	0.53%	0.34%	0.33%
5	1.06%	0.83%	0.93%	5	0.94%	0.56%	0.60%
6	2.75%	1.77%	2.45%	6	3.12%	1.29%	1.64%
7	5.92%	3.60%	4.82%	7	8.38%	3.03%	3.85%
8	7.87%	5.27%	6.60%	8	8.03%	4.87%	6.09%
9	6.85%	5.39%	5.81%	9	7.41%	4.94%	5.76%
10	5.77%	4.79%	5.05%	10	6.29%	3.98%	5.53%
11	5.28%	4.63%	5.04%	11	5.35%	4.34%	5.65%
12	5.40%	4.96%	5.34%	12	5.27%	4.65%	6.14%
13	5.71%	5.49%	5.68%	13	5.39%	5.12%	6.39%
14	5.69%	5.63%	5.77%	14	5.43%	5.51%	6.58%
15	6.08%	6.48%	6.51%	15	5.47%	6.65%	6.99%
16	6.69%	8.03%	7.80%	16	5.84%	8.61%	7.79%
17	7.11%	9.27%	8.40%	17	6.72%	10.72%	8.35%
18	7.02%	8.91%	8.10%	18	7.43%	10.83%	8.17%
19	5.55%	6.63%	6.05%	19	5.67%	7.75%	6.10%
20	4.08%	4.82%	4.55%	20	4.16%	5.11%	4.62%
21	3.25%	3.85%	3.68%	21	2.88%	4.39%	3.51%
22	2.56%	3.14%	2.71%	22	2.17%	3.02%	2.47%
23	1.89%	2.21%	1.81%	23	1.44%	1.76%	1.53%
24	1.28%	1.62%	1.15%	24	0.89%	1.14%	0.89%
TOTAL	100.00%	100.00%	100.00%	TOTAL	100.00%	100.00%	100.00%

Table 360
Hourly Percentages Compiled for Truck Traffic

The following four tables and two charts show hourly percentages of truck traffic sorted by Maintenance Functional Class (MFC). These tables are applied separately to raw truck data of less than 24-hours, including both automatic vehicle classification (AVC) and manual counts. Manual classification counts are the primary source of data using these tables. The hourly percentages are calculated from these tables and applied to the sum of the known hour periods and in turn converted to a 24-hour truck total.

The factors were developed using 20,000 AVC counts, collected and verified over the last five years. The raw count data was assigned to the respective Traffic Pattern Group (TPG), the truck data was extracted by vehicle type, and the TDS Statistical Analysis tool generated a summary showing the hourly percentage table by direction (applied to divided roadways). Truck data is tabulated according to MFC. Hourly weekday truck distribution provides evidence that the hourly percentage changes by MFC provide a valid breakdown of groups. Therefore, a summary was produced converting the TPGs to comparable MFC groups to be consistent with the characteristics of the 2020 Hourly Percentages (Truck Traffic) tables.

TPG 1 & 2				TPG 3 & 4			
MAINTENANCE FUNCTIONAL CLASS A (INTERSTATES)				MAINTENANCE FUNCTIONAL CLASS B (PRINCIPAL ARTERIALS)			
HOUR	DIR 1	DIR 2	TOTAL	HOUR	DIR 1	DIR 2	TOTAL
1	1.97%	2.22%	2.14%	1	0.96%	1.08%	0.96%
2	1.75%	2.08%	1.97%	2	0.92%	1.02%	0.92%
3	1.81%	2.09%	2.00%	3	1.00%	1.11%	1.02%
4	2.03%	2.38%	2.26%	4	1.28%	1.44%	1.34%
5	2.50%	2.82%	2.71%	5	1.97%	2.08%	2.03%
6	3.34%	3.60%	3.49%	6	3.63%	3.37%	3.55%
7	4.48%	4.54%	4.44%	7	5.90%	5.32%	5.65%
8	4.86%	4.88%	4.80%	8	6.74%	6.23%	6.62%
9	5.19%	5.11%	5.14%	9	7.07%	6.55%	6.96%
10	5.63%	5.38%	5.46%	10	6.90%	6.59%	6.89%
11	5.93%	5.37%	5.62%	11	6.78%	6.55%	6.84%
12	6.05%	5.41%	5.70%	12	6.77%	6.58%	6.85%
13	5.97%	5.51%	5.72%	13	6.66%	6.64%	6.74%
14	5.95%	5.61%	5.78%	14	6.62%	6.68%	6.75%
15	5.99%	5.75%	5.86%	15	6.75%	6.91%	6.89%
16	5.99%	5.66%	5.79%	16	6.49%	6.80%	6.62%
17	5.61%	5.44%	5.49%	17	5.69%	6.12%	5.77%
18	5.13%	5.06%	5.07%	18	4.73%	4.93%	4.71%
19	4.57%	4.60%	4.58%	19	3.67%	3.86%	3.63%
20	3.94%	4.07%	4.00%	20	2.78%	2.97%	2.74%
21	3.43%	3.61%	3.53%	21	2.20%	2.30%	2.16%
22	3.03%	3.27%	3.17%	22	1.81%	1.95%	1.76%
23	2.63%	2.93%	2.83%	23	1.46%	1.58%	1.42%
24	2.22%	2.61%	2.45%	24	1.22%	1.34%	1.18%
TOTAL	100.00%	100.00%	100.00%	TOTAL	100.00%	100.00%	100.00%

Table 360
Hourly Percentages Compiled for Truck Traffic (Continued)

TPG 5, 6 & 7				TPG 8 & 9			
MAINTENANCE FUNCTIONAL CLASS C (MINOR ARTERIALS)				MAINTENANCE FUNCTIONAL CLASS D, E & F (RURAL COLLECTORS)			
HOUR	DIR 1	DIR 2	TOTAL	HOUR	DIR 1	DIR 2	TOTAL
1	0.90%	1.10%	0.72%	1	1.22%	1.69%	0.79%
2	0.86%	1.02%	0.68%	2	1.07%	1.62%	0.73%
3	0.96%	1.12%	0.76%	3	1.19%	1.71%	0.80%
4	1.22%	1.44%	1.01%	4	1.34%	2.03%	1.03%
5	1.85%	2.05%	1.63%	5	1.93%	2.59%	1.65%
6	3.38%	3.32%	3.13%	6	2.97%	3.73%	3.12%
7	5.73%	5.14%	5.56%	7	5.01%	4.88%	5.53%
8	6.97%	6.18%	7.07%	8	6.42%	5.60%	6.95%
9	7.35%	6.70%	7.30%	9	6.56%	6.01%	7.09%
10	7.04%	6.71%	6.93%	10	6.70%	6.21%	6.72%
11	6.95%	6.58%	6.86%	11	6.75%	6.02%	6.75%
12	6.84%	6.67%	6.94%	12	6.87%	6.11%	6.80%
13	6.86%	6.64%	6.87%	13	6.62%	6.28%	6.79%
14	6.74%	6.73%	6.93%	14	6.82%	6.04%	6.86%
15	6.85%	7.02%	7.23%	15	6.79%	6.19%	7.20%
16	6.77%	6.93%	7.25%	16	6.54%	6.16%	7.36%
17	5.73%	6.17%	6.25%	17	5.78%	5.87%	6.35%
18	4.62%	4.99%	4.99%	18	4.71%	4.78%	5.09%
19	3.64%	3.79%	3.62%	19	3.93%	4.06%	3.69%
20	2.71%	2.90%	2.64%	20	3.06%	3.12%	2.72%
21	2.07%	2.28%	2.02%	21	2.50%	2.78%	2.13%
22	1.62%	1.77%	1.53%	22	2.07%	2.42%	1.64%
23	1.28%	1.54%	1.16%	23	1.72%	2.09%	1.24%
24	1.06%	1.21%	0.92%	24	1.43%	2.01%	0.97%
TOTAL	100.00%	100.00%	100.00%	TOTAL	100.00%	100.00%	100.00%

Hourly Percentages Charts

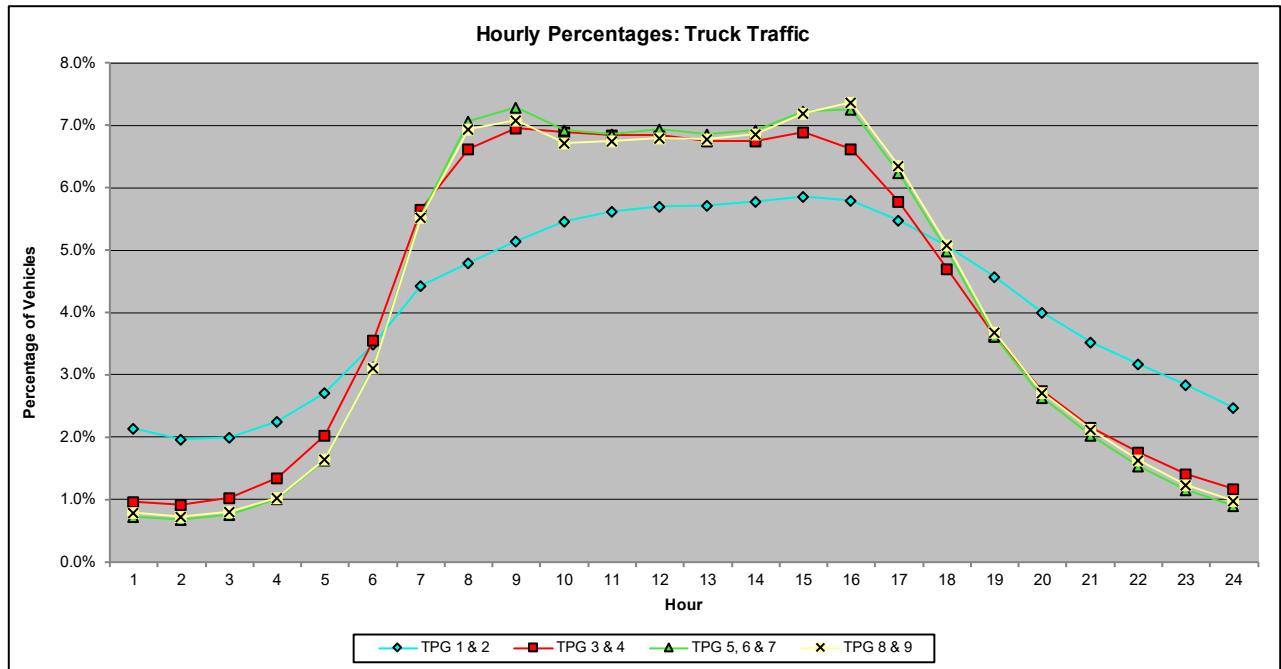
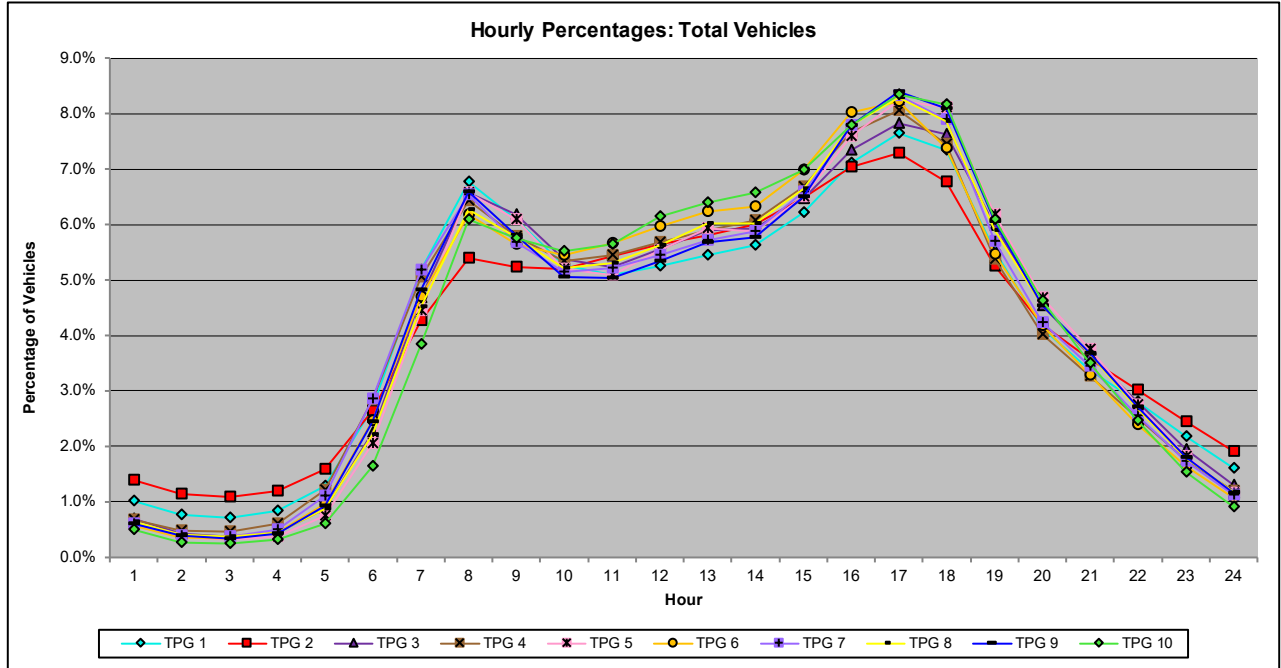


Table 355
Average Day of Week by Month Factors Compiled for Total Vehicles

The following 12 tables show average day of week factors by month compiled for total vehicles for the year 2019. **Values shown for Table 355 are from 2019 due to underrepresented 2020 traffic data values caused by the COVID-19 pandemic.** Current year permanent site traffic data is assembled and the data is placed in the respective TPG. Annual Average Daily Traffic (AADT) is tabulated individually for each of the 109 permanent site stations utilized in 2019. A factor is calculated for each day from each station and a list is tabulated by month and day of the week. This data is assembled by day and TPG for each station. The result is a group factor, which can be applied to a 24-hour raw traffic count taken during any day of the year to develop an AADT volume.

January 2019										
DAY	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
Monday	1.096	1.209	1.100	1.165	1.141	1.160	1.179	1.218	1.106	1.479
Tuesday	1.119	1.238	1.087	1.112	1.029	1.071	1.104	1.214	1.048	1.548
Wednesday	1.007	1.106	1.007	1.140	1.001	1.091	1.072	1.142	1.045	1.408
Thursday	0.983	1.078	0.961	1.069	1.005	1.053	1.051	1.123	1.008	1.424
Friday	0.926	1.001	0.912	1.002	0.972	0.975	0.955	0.986	0.963	1.169
Saturday	1.264	1.174	1.189	1.278	1.105	1.305	1.334	1.245	1.321	1.291
Sunday	1.303	1.273	1.376	1.439	1.280	1.547	1.352	1.470	1.341	1.600
DAY OF MONTH	1.100	1.154	1.090	1.172	1.076	1.172	1.149	1.200	1.119	1.417

February 2019										
DAY	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
Monday	1.027	1.152	1.035	1.076	1.109	1.105	1.100	1.181	1.003	1.470
Tuesday	0.944	1.074	0.959	1.009	0.967	1.092	1.024	1.044	0.985	1.433
Wednesday	0.973	1.067	0.934	1.058	0.925	1.078	1.033	1.084	0.968	1.605
Thursday	0.947	1.086	0.928	1.010	0.932	1.012	0.985	1.040	0.959	1.302
Friday	0.925	1.002	0.936	0.984	0.953	0.963	1.000	1.028	1.002	1.227
Saturday	1.114	1.204	1.115	1.156	1.078	1.264	1.124	1.266	1.206	1.231
Sunday	1.280	1.253	1.334	1.356	1.253	1.495	1.408	1.409	1.340	1.615
DAY OF MONTH	1.030	1.120	1.035	1.093	1.031	1.144	1.096	1.150	1.066	1.412

Table 355
Average Day of Week by Month Factors Compiled for Total Vehicles
(Continued)

March 2019										
DAY	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
Monday	1.322	1.028	1.026	1.429	1.001	1.057	1.076	1.117	1.080	1.412
Tuesday	1.098	1.009	0.931	1.035	0.920	1.003	0.988	1.003	1.004	1.324
Wednesday	0.925	1.201	0.910	1.391	0.911	0.966	0.959	0.978	0.974	1.351
Thursday	0.885	0.923	0.890	0.982	0.950	0.961	0.954	0.975	0.961	1.239
Friday	0.843	0.838	0.874	0.919	0.887	0.925	0.922	0.945	0.955	1.147
Saturday	1.137	1.112	1.091	1.127	1.255	1.241	1.063	1.182	1.176	1.136
Sunday	1.205	1.364	1.273	1.584	1.957	1.454	1.269	1.314	1.315	1.502
DAY OF MONTH	1.059	1.068	0.999	1.210	1.126	1.087	1.033	1.073	1.066	1.302

April 2019										
DAY	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
Monday	0.872	0.932	0.910	0.956	0.866	0.927	0.974	0.929	0.999	1.125
Tuesday	0.876	0.939	0.884	0.950	0.836	0.908	0.953	0.915	0.934	1.049
Wednesday	0.864	0.928	0.864	0.938	0.818	0.888	0.911	0.897	0.915	1.014
Thursday	0.822	0.865	0.851	0.882	0.833	0.857	0.889	0.878	0.909	1.043
Friday	0.792	0.798	0.853	0.850	0.824	0.869	0.885	0.906	0.923	0.949
Saturday	0.987	0.944	1.044	1.020	0.931	1.089	1.006	1.056	1.109	0.930
Sunday	1.061	0.948	1.191	1.092	0.981	1.258	1.172	1.219	1.235	1.053
DAY OF MONTH	0.896	0.908	0.942	0.955	0.870	0.971	0.970	0.971	1.003	1.023

May 2019										
DAY	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
Monday	0.925	0.963	0.994	0.951	0.935	0.959	0.980	0.905	1.022	0.938
Tuesday	0.855	0.907	0.875	0.916	0.854	0.880	0.923	0.873	0.940	0.966
Wednesday	0.846	0.902	0.861	0.906	0.816	0.874	0.888	0.852	0.894	0.991
Thursday	0.819	0.852	0.844	0.869	0.825	0.859	0.879	0.824	0.883	0.911
Friday	0.776	0.762	0.816	0.795	0.800	0.794	0.810	0.779	0.853	0.748
Saturday	0.942	0.899	1.005	0.970	0.931	0.984	0.937	0.943	1.060	0.678
Sunday	1.059	0.958	1.177	1.072	0.945	1.180	1.158	1.016	1.278	0.727
DAY OF MONTH	0.889	0.892	0.939	0.926	0.872	0.933	0.939	0.885	0.990	0.851

Table 355
Average Day of Week by Month Factors Compiled for Total Vehicles
(Continued)

June 2019										
DAY	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
Monday	0.864	0.885	0.894	0.903	0.947	0.867	0.919	0.893	0.952	0.866
Tuesday	0.858	0.901	0.872	0.917	0.849	0.867	0.879	0.880	0.901	0.880
Wednesday	0.847	0.861	0.861	0.893	0.863	0.840	0.848	0.853	0.879	0.907
Thursday	0.816	0.822	0.848	0.859	0.864	0.830	0.867	0.835	0.896	0.889
Friday	0.776	0.730	0.813	0.827	0.848	0.795	0.788	0.783	0.852	0.709
Saturday	0.950	0.846	1.018	0.986	1.073	0.989	0.899	0.925	1.010	0.657
Sunday	1.019	0.869	1.161	0.992	0.971	1.142	0.968	0.973	1.165	0.805
DAY OF MONTH	0.876	0.845	0.924	0.911	0.916	0.904	0.881	0.877	0.951	0.816

July 2019										
DAY	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
Monday	0.853	0.795	0.891	0.895	0.939	0.859	0.904	0.862	0.949	0.817
Tuesday	0.838	0.840	0.868	0.888	0.870	0.847	0.894	0.857	0.898	0.843
Wednesday	0.820	0.803	0.858	0.862	0.859	0.829	0.836	0.848	0.861	0.829
Thursday	0.886	0.791	0.944	0.874	0.932	0.903	0.845	0.830	1.035	0.762
Friday	0.814	0.712	0.871	0.825	0.870	0.800	0.804	0.819	0.890	0.663
Saturday	0.940	0.798	1.065	0.968	0.938	0.985	0.911	0.947	1.090	0.573
Sunday	0.978	0.784	1.178	0.961	1.028	1.046	0.911	0.968	1.262	0.634
DAY OF MONTH	0.876	0.789	0.954	0.896	0.919	0.895	0.872	0.876	0.998	0.732

August 2019										
DAY	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
Monday	0.863	0.766	0.907	0.902	0.913	0.879	0.898	0.859	0.934	0.855
Tuesday	0.911	0.920	0.889	0.904	0.859	0.883	0.925	0.882	0.914	0.932
Wednesday	0.840	0.841	0.867	0.886	0.851	0.874	0.885	0.873	0.903	0.911
Thursday	0.819	0.775	0.849	0.833	0.835	0.846	0.836	0.819	0.907	0.837
Friday	0.883	0.695	0.827	0.765	0.814	0.809	0.822	0.797	0.862	0.677
Saturday	0.926	0.754	1.025	0.879	0.918	1.023	0.918	0.938	1.045	0.564
Sunday	0.967	0.761	1.133	0.940	1.016	1.114	1.001	0.980	1.178	0.655
DAY OF MONTH	0.887	0.787	0.928	0.873	0.887	0.918	0.898	0.878	0.963	0.776

Table 355
Average Day of Week by Month Factors Compiled for Total Vehicles
(Continued)

September 2019										
DAY	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
Monday	0.958	0.902	0.939	0.941	0.992	0.932	0.943	0.935	0.949	0.980
Tuesday	1.035	1.109	0.881	0.920	0.873	0.857	0.926	0.895	0.915	1.037
Wednesday	1.008	0.940	0.860	0.928	0.847	0.867	0.914	0.883	0.895	1.022
Thursday	0.855	1.105	0.849	0.882	0.847	0.844	0.910	0.870	0.895	0.996
Friday	0.822	0.797	0.821	0.816	0.817	0.783	0.821	0.816	0.865	0.836
Saturday	0.940	0.904	1.002	0.979	0.952	0.993	0.983	0.994	1.099	0.704
Sunday	1.026	0.907	1.139	1.041	1.038	1.113	1.098	1.084	1.150	0.850
DAY OF MONTH	0.949	0.952	0.927	0.930	0.909	0.913	0.942	0.925	0.967	0.918

October 2019										
DAY	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
Monday	0.934	0.859	0.929	0.902	0.884	0.916	0.981	0.949	0.987	1.139
Tuesday	0.882	0.893	0.881	0.936	0.847	0.897	0.949	0.906	0.944	1.124
Wednesday	0.882	0.920	0.876	0.925	0.829	0.896	0.922	0.906	0.930	1.137
Thursday	0.861	0.859	0.864	0.893	0.831	0.885	0.926	0.904	0.927	1.104
Friday	0.793	0.749	0.823	0.786	0.798	0.821	0.830	0.833	0.870	0.891
Saturday	0.917	0.906	1.019	0.967	0.945	1.067	0.938	1.039	1.089	0.833
Sunday	1.011	0.883	1.202	1.033	1.116	1.199	1.152	1.135	1.253	1.107
DAY OF MONTH	0.897	0.867	0.942	0.920	0.893	0.954	0.957	0.953	1.000	1.048

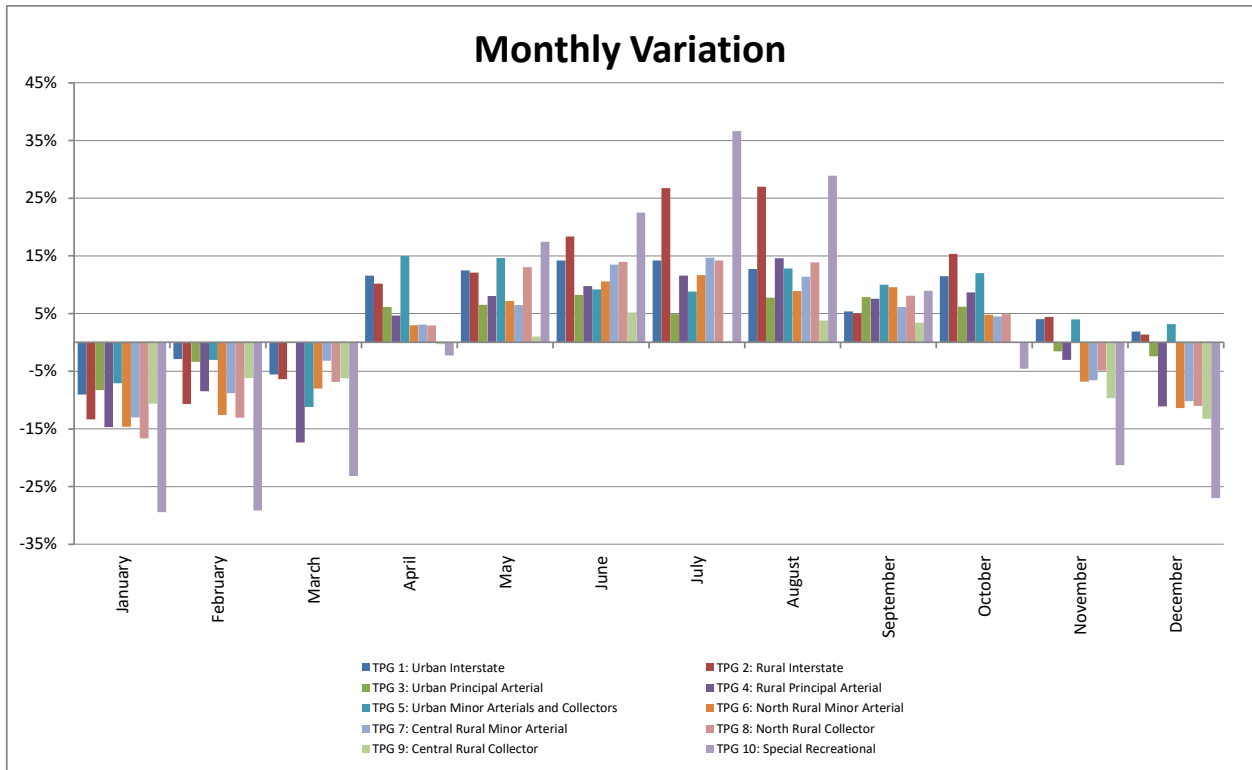
Table 355
Average Day of Week by Month Factors Compiled for Total Vehicles
(Continued)

November 2019										
DAY	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
Monday	0.980	0.962	1.038	0.995	0.964	0.989	1.051	1.023	1.048	1.248
Tuesday	0.917	0.965	0.909	0.994	0.889	0.966	1.008	0.992	0.988	1.229
Wednesday	0.887	0.944	0.892	0.960	0.864	0.957	0.980	0.942	0.979	1.195
Thursday	0.948	0.969	1.022	1.066	0.961	1.049	1.076	1.056	1.093	1.519
Friday	0.866	0.870	0.898	0.877	0.866	0.924	0.928	0.909	0.976	1.095
Saturday	0.992	0.967	1.083	1.105	1.015	1.200	1.077	1.119	1.199	1.114
Sunday	1.139	1.027	1.269	1.222	1.174	1.425	1.371	1.321	1.468	1.489
DAY OF MONTH	0.961	0.958	1.016	1.031	0.962	1.073	1.070	1.052	1.107	1.270

December 2019										
DAY	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
Monday	1.033	0.951	1.013	1.067	0.927	1.061	1.117	1.073	1.120	1.377
Tuesday	1.002	1.054	0.979	1.093	0.927	1.105	1.103	1.091	1.105	1.426
Wednesday	1.060	1.085	1.050	1.266	1.009	1.162	1.106	1.196	1.125	1.402
Thursday	0.876	0.938	0.928	1.010	0.891	1.022	1.026	1.029	1.046	1.338
Friday	0.844	0.850	0.882	0.948	0.859	0.960	0.948	0.950	0.981	1.173
Saturday	0.970	0.998	1.059	1.171	1.007	1.198	1.120	1.212	1.260	1.268
Sunday	1.087	1.030	1.263	1.320	1.167	1.392	1.376	1.314	1.431	1.601
DAY OF MONTH	0.982	0.987	1.025	1.125	0.969	1.128	1.114	1.124	1.153	1.369

Monthly Variation Charts by Traffic Pattern Group (TPG)

The chart below shows the different variations between months and traffic pattern groups (TPG). The seasonal factors, which are the data this chart is derived from, show the percentage difference between the raw data count and the annual average daily traffic (AADT). The seasonal factors data can be found in Table 355.



Values shown are from 2019 due to underrepresented 2020 traffic data values caused by the COVID-19 pandemic.

Table 365
Average Day of Week by Month Factors Compiled for Truck Traffic

The following table shows average day of week factors by month compiled for truck traffic. This data is used to convert 24-hour truck data to Average Daily Truck Traffic (ADTT). The ADTT is determined by applying the appropriate factor for the day of week and month to the truck traffic. Truck seasonal variation charts, which are based on truck traffic studies, indicate that truck traffic varies little for both the Interstate and Non-Interstate systems. On the other hand, day of week distribution does indicate a variation between weekdays (Monday through Friday) versus weekend (Saturday through Sunday) truck flow.

Values shown for Table 365 are from 2019 due to underrepresented 2020 traffic data values caused by the COVID-19 pandemic.

AVERAGE DAY OF WEEK BY MONTH FOR TRUCK TRAFFIC							
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
JANUARY	1.38	1.23	0.94	0.91	0.92	1.77	2.38
FEBRUARY	1.45	0.90	0.92	0.88	0.91	1.89	2.79
MARCH	1.38	0.85	0.86	0.86	0.91	1.86	2.63
APRIL	0.97	0.78	0.76	0.75	0.85	1.68	2.55
MAY	1.28	0.80	0.74	0.72	0.75	1.47	2.26
JUNE	0.92	0.76	0.76	0.76	0.77	1.35	1.91
JULY	0.98	0.77	0.76	1.04	0.82	1.41	1.83
AUGUST	0.98	0.78	0.76	0.74	0.76	1.37	1.79
SEPTEMBER	1.09	0.77	0.73	0.70	0.72	1.38	1.87
OCTOBER	0.91	0.71	0.70	0.70	0.70	1.42	1.98
NOVEMBER	0.95	0.76	0.74	1.18	0.85	1.57	2.11
DECEMBER	1.14	1.01	1.68	0.82	0.81	1.65	2.48

Table 370 Yearly Growth Factors

The yearly growth factors (shown in the following tables) are used to compute the current estimated average daily traffic for count data that is older than the current year. The factor application is applied by Traffic Pattern Group (TPG) and is used to calculate total vehicles and truck estimates. A limited amount of count data is processed through the Yearly Growth Factor table, since most traffic counts are for the current year. **Please keep in mind that the 2020 data was impacted by the COVID-19 pandemic. Values shown in 2020 columns represent an update published 9/2021.**

To use this table, select the base year of the count from the “YEAR” column and multiply it by the percentage under the corresponding “TPG” row.

For example, to determine the current year estimate (2020) of a 2011 base year count having a TPG 5, multiply 0.772 (-22.8%) by the AADT of the 2011 count.

Yearly Growth Factors: 2011-2020										
TPG	10-11 (2011)	11-12 (2012)	12-13 (2013)	13-14 (2014)	14-15 (2015)	15-16 (2016)	16-17 (2017)	17-18 (2018)	18-19 (2019)	19-20 (2020)
TPG 1	-0.7%	-0.9%	-1.1%	0.1%	0.5%	0.8%	0.9%	1.1%	0.8%	-19.0%
TPG 2	1.7%	2.2%	2.2%	1.2%	1.3%	1.0%	1.1%	1.1%	1.2%	-18.0%
TPG 3	-0.6%	-1.0%	-1.0%	-0.7%	-0.8%	-0.7%	-0.7%	-0.8%	-0.7%	-18.7%
TPG 4	-0.3%	-0.4%	-0.5%	-0.5%	-0.5%	-0.5%	-0.5%	-0.6%	-0.5%	-15.8%
TPG 5	-0.6%	-1.0%	-1.0%	-0.7%	-0.8%	-0.7%	-0.7%	-0.8%	-0.7%	-17.2%
TPG 6	-0.3%	-0.4%	-0.5%	-0.5%	-0.5%	-0.5%	-0.5%	-0.6%	-0.5%	-11.8%
TPG 7	-0.3%	-0.4%	-0.5%	-0.5%	-0.5%	-0.5%	-0.5%	-0.6%	-0.5%	-10.6%
TPG 8	-0.3%	-0.4%	-0.5%	-0.5%	-0.5%	-0.5%	-0.5%	-0.6%	-0.5%	-5.8%
TPG 9	-0.3%	-0.4%	-0.5%	-0.5%	-0.5%	-0.5%	-0.5%	-0.6%	-0.5%	-11.5%
TPG 10	-0.3%	-0.4%	-0.5%	-0.5%	-0.5%	-0.5%	-0.5%	-0.6%	-0.5%	-6.0%

The table below shows yearly growth percentages by TPG for 2011 through 2020.

Percent Growth: 2011-2020										
TPG	10-20 (2011)	11-20 (2012)	12-20 (2013)	13-20 (2014)	14-20 (2015)	15-20 (2016)	16-20 (2017)	17-20 (2018)	18-20 (2019)	19-20 (2020)
TPG 1	-17.8%	-17.2%	-16.4%	-15.5%	-15.6%	-16.0%	-16.7%	-17.4%	-18.3%	-19.0%
TPG 2	-6.7%	-8.3%	-10.3%	-12.2%	-13.2%	-14.4%	-15.2%	-16.1%	-17.0%	-18.0%
TPG 3	-24.2%	-23.8%	-23.0%	-22.2%	-21.7%	-21.0%	-20.5%	-19.9%	-19.3%	-18.7%
TPG 4	-19.3%	-19.1%	-18.8%	-18.4%	-18.0%	-17.5%	-17.1%	-16.7%	-16.2%	-15.8%
TPG 5	-22.8%	-22.3%	-21.6%	-20.8%	-20.2%	-19.6%	-19.0%	-18.4%	-17.8%	-17.2%
TPG 6	-15.5%	-15.2%	-14.9%	-14.5%	-14.1%	-13.6%	-13.2%	-12.7%	-12.2%	-11.8%
TPG 7	-14.4%	-14.1%	-13.8%	-13.3%	-12.9%	-12.5%	-12.0%	-11.6%	-11.0%	-10.6%
TPG 8	-9.7%	-9.5%	-9.1%	-8.6%	-8.2%	-7.7%	-7.3%	-6.8%	-6.2%	-5.8%
TPG 9	-15.3%	-15.0%	-14.7%	-14.2%	-13.8%	-13.4%	-12.9%	-12.5%	-12.0%	-11.5%
TPG 10	-9.9%	-9.7%	-9.3%	-8.9%	-8.4%	-7.9%	-7.5%	-7.0%	-6.5%	-6.0%

Functional Class Groups

Traffic volume data displayed in PennDOT's Roadway Management System (RMS) is projected to a current estimate year (2020) based on County/Functional Class Group (FCG). This provides the user with trends relative to a specific county. The factors are applied annually to the Department's Roadway Management System (RMS) to produce the current year traffic volume estimate values.

The first table shows the PennDOT FCG's with a description and corresponding Functional Class Codes (FCCs). The second table shows the FHWA revision of highway functional classifications. FHWA finalized the functional class guidelines in 2013. RMS was updated to reflect these changes in late summer 2016.

FCG	DESCRIPTIVE NAME	FCC
FCG 1	URBAN INTERSTATE	FCC 11
FCG 2	RURAL INTERSTATE	FCC 01
FCG 3	URBAN - OTHER FREEWAYS/EXPRESSWAYS	FCC 12
	URBAN - OTHER PRINCIPAL ARTERIALS	FCC 14
	URBAN - MINOR ARTERIALS	FCC 16
	RAMPS	FCC 99
FCG 4	RURAL - OTHER FREEWAYS/EXPRESSWAYS	FCC 03
	RURAL - OTHER PRINCIPAL ARTERIALS	FCC 02
	RURAL - MINOR ARTERIAL	FCC 06
FCG 5	URBAN - MAJOR COLLECTOR	FCC 17
	URBAN - MINOR COLLECTOR	FCC 18
	URBAN - LOCAL	FCC 19
FCG 6	RURAL - MAJOR COLLECTOR	FCC 07
	RURAL - MINOR COLLECTOR	FCC 08
	RURAL - LOCAL	FCC 09

FCC	DESCRIPTIVE NAME	OLD FCC
1	INTERSTATE	01-11
2	OTHER FREEWAY / EXPRESSWAY	03-12
3	OTHER PRINCIPAL ARTERIAL	02-14
4	MINOR ARTERIAL	06-16
5	MAJOR COLLECTOR	07-17
6	MINOR COLLECTOR	08-18
7	LOCAL	09-19

** The Federal Functional Classification of a ramp reflects the highest order of Federal Functional Classification of the roadways to which the ramp connects. As an example, Adams County, SR 8001 is the interchange at US 15, a principal arterial, and SR 3001, a minor arterial; therefore, the segments associated with SR 8001 are assigned a Federal Functional Classification of principal arterial.

Table 380 Axle Correction Factors

Axle volume count data is collected by counting vehicle axles (two axle strikes equals one vehicle).

Since these counts may include a number of trucks with more than two axles, they must be corrected to represent the actual volume of total vehicles. The axle correction factors are applied to raw axle volume count data, adjusting it to a correct representative volume.

2020 Axle Correction Factors are shown in the table below.

TPG	Axle Correction Factor
1	83.23%
2	70.61%
3	95.78%
4	88.51%
5	97.58%
6	92.70%
7	94.81%
8	94.98%
9	96.22%
10	96.08%

Table 385 Design Hour Factor Default Values

The design hour factor (K-factor) represents the percent of Annual Average Daily Traffic (AADT) occurring in the peak hour. This value is important in the design of roadways and capacity analysis studies.

Count data less than 24-hours and/or data not having directional volumes will not have the necessary raw data required to compute actual K-factor values. The K-factor default values were produced to complete unknown values not generated through the raw count factoring process, and to satisfy Highway Performance Monitoring System (HPMS) reporting requirements. They were developed by processing the actual hourly data from the 122 permanent site stations to identify the 30th highest hour; this hourly volume was divided by the AADT for each station, producing a K-factor. The factors were then averaged by Traffic Pattern Group (TPG).

During the raw count factoring process, the K-factor value is programmatically inserted into the Roadway Management System (RMS) database if the raw count data is insufficient to calculate an actual K-factor.

2020 K-Factors and corresponding TPGs are shown in the table below.

TPG	K factor default value
1	11%
2	10%
3	11%
4	11%
5	11%
6	12%
7	11%
8	13%
9	12%
10	17%

Tables 390 and 395 Equivalent Single Axle Load Factors

Equivalent Single Axle Load (ESAL) tables are used to calculate pavement loadings (rigid and flexible types) to produce a common parameter for design and planning purposes.

ESAL factors used in RMS were derived through a composite of data obtained from AASHTO guidelines and test data collected from historical Loadometer Surveys. Data obtained through WIM equipment is under review at this time and will be considered in development of future ESAL factors. The AASHTO Mechanistic Empirical Design Guide (MEPDG) has incorporated improved methods of determining loading effects of traffic termed axle-load spectra. In the future, these new methods will supersede the use of ESAL factors.

2020 ESAL factors for rigid pavements are shown by Traffic Pattern Group (TPG) and vehicle classification in **Table 390**, below.

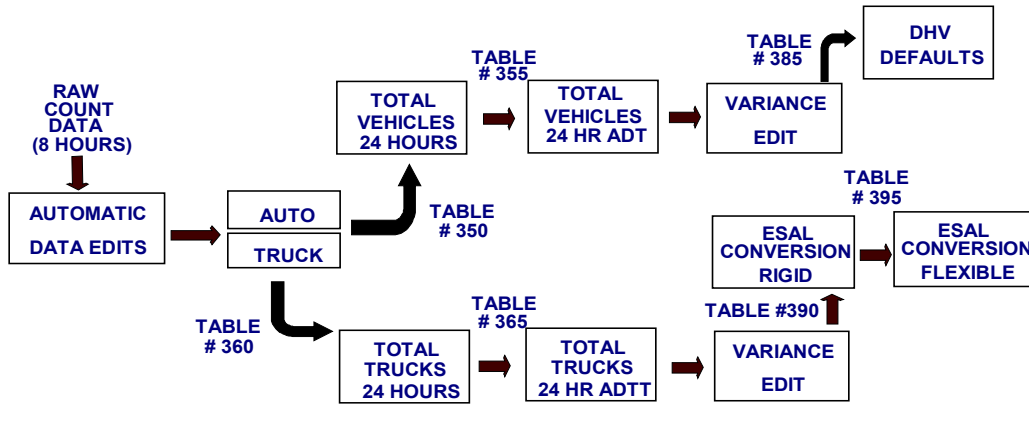
RIGID ESAL FACTORS										
CLASS	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
BUS	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240
2 AXLE SIX TIRE	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240
3 AXLE SINGLE UNIT	1.150	1.150	1.150	1.150	1.150	1.150	1.150	1.150	1.150	1.150
4 AXLE SINGLE UNIT	7.000	7.000	7.000	7.000	7.000	7.000	7.000	7.000	7.000	7.000
3 AXLE WITH TRAILER	0.600	0.600	0.600	0.600	0.600	0.600	0.600	0.600	0.600	0.600
3 AXLE MULTI-AXLE TRAILER	1.590	1.590	1.590	1.590	1.590	1.590	1.590	1.590	1.590	1.590
6 AXLE SINGLE TRAILER	1.421	1.421	1.421	1.421	1.421	1.421	1.421	1.421	1.421	1.421
5 AXLE MULTI TRAILER	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400
6 AXLE MULTI TRAILER	1.421	1.421	1.421	1.421	1.421	1.421	1.421	1.421	1.421	1.421
7 AXLE MULTI TRAILER	1.421	1.421	1.421	1.421	1.421	1.421	1.421	1.421	1.421	1.421

2020 ESAL factors for flexible pavements are shown by Traffic Pattern Group (TPG) and vehicle classification in **Table 395**, below.

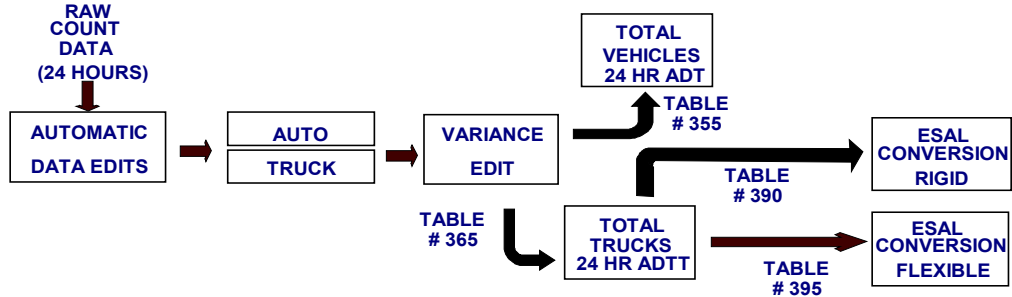
FLEXIBLE ESAL FACTORS										
CLASS	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
BUS	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240
2 AXLE SIX TIRE	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240
3 AXLE SINGLE UNIT	0.820	0.820	0.820	0.820	0.820	0.820	0.820	0.820	0.820	0.820
4 AXLE SINGLE UNIT	4.500	4.500	4.500	4.500	4.500	4.500	4.500	4.500	4.500	4.500
3 AXLE WITH TRAILER	0.440	0.440	0.440	0.440	0.440	0.440	0.440	0.440	0.440	0.440
3 AXLE MULTI-AXLE TRAILER	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6 AXLE SINGLE TRAILER	0.750	0.750	0.750	0.750	0.750	0.750	0.750	0.750	0.750	0.750
5 AXLE MULTI TRAILER	2.330	2.330	2.330	2.330	2.330	2.330	2.330	2.330	2.330	2.330
6 AXLE MULTI TRAILER	1.276	1.276	1.276	1.276	1.276	1.276	1.276	1.276	1.276	1.276
7 AXLE MULTI TRAILER	1.276	1.276	1.276	1.276	1.276	1.276	1.276	1.276	1.276	1.276

Roadway Management System Factor Table Application Flow Chart

I. MANUAL COUNT (LESS THAN 24 HOURS)

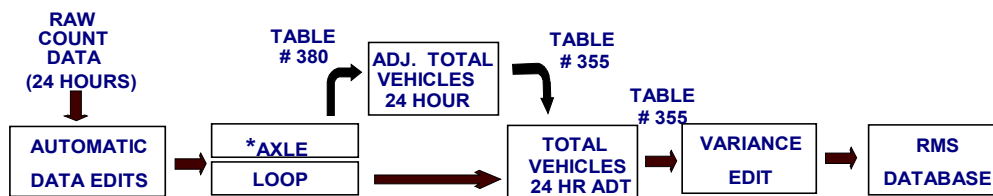


II. AUTOMATIC VEHICLE CLASSIFICATION COUNT



Note: DHV is computed from the raw count data.

III. AXLE AND LOOP VOLUME COUNTS



* Total Vehicles are computed by counting axles (2 axles equals 1 Vehicle)

Acronyms

AADT	Annual Average Daily Traffic
AASHTO	American Association of State Highway & Transportation Officials
ADT	Average Daily Traffic
ADTT	Average Daily Truck Traffic
ATR	Automatic Traffic Recorder
AVC	Automatic Vehicle Classification
BPR	Bureau of Planning and Research
CAVC	Continuous Automatic Vehicle Classification
DHV	Design Hour Volume
DOW	Day of Week
DRJTBC	Delaware River Joint Toll Bridge Commission
DVMT	Daily Vehicle Miles of Travel
ESAL	Equivalent Single Axle Load
FCC	Functional Classification Code
FCG	Functional Classification Group
FHWA	Federal Highway Administration
GIS	Geographic Information System
HPMS	Highway Performance Monitoring System
LTPP	Long Term Pavement Performance
MEPDG	Mechanistic Empirical Design Guide
MFC	Maintenance Functional Classification
MPO	Metropolitan Planning Organization
RPO	Rural Planning Organization
RMS	Roadway Management System
SHRP	Strategic Highway Research Program
SR	State Route
STIP	Short-Term In-Pavement
TDS	Traffic Data System
TMAS	Traffic Monitoring Analysis System
TMG	Traffic Monitoring Guide
TPG	Traffic Pattern Group
WIM	Weigh-in-Motion
VWIM	Virtual Weigh-in-Motion

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